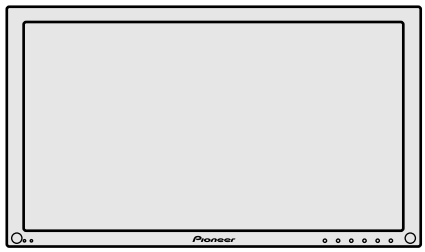
Pioneer sound.vision.soul

Service Manual



ORDER NO.
ARP3111

PLASMA DISPLAY

PDP-433PE
PDP-433PU

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	PDP-433PE	PDP-433PU		
WYVI6	○	–	AC220 - 240V	
KUC	–	○	AC120V	

● This Service Manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-433PE PDP-433PU	ARP3112	SCHEMATIC DIAGRAM and PCB DIAGRAM

● This product is component of system.

Component		System		Service Manual	Remaks
Plasma Display System		PDP-433HDE	PDP-4330HD	————	
	Media Receiver	PDP-R03E	PDP-R03U	PDP-R03E : ARP3110 PDP-R03U : ARP3113	
	Plasma Display	PDP-433PE	PDP-433PU	ARP3111 ARP3112	This service manual

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
© PIONEER CORPORATION 2002

T – IZE JAN. 2002 Printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE :Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

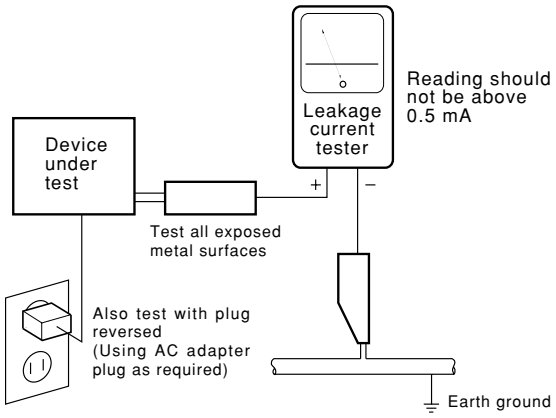
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's.
   Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and service technician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully.
     Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

CHARGED SECTION AND HIGH VOLTAGE GENERATING POINT

■ Charged Section

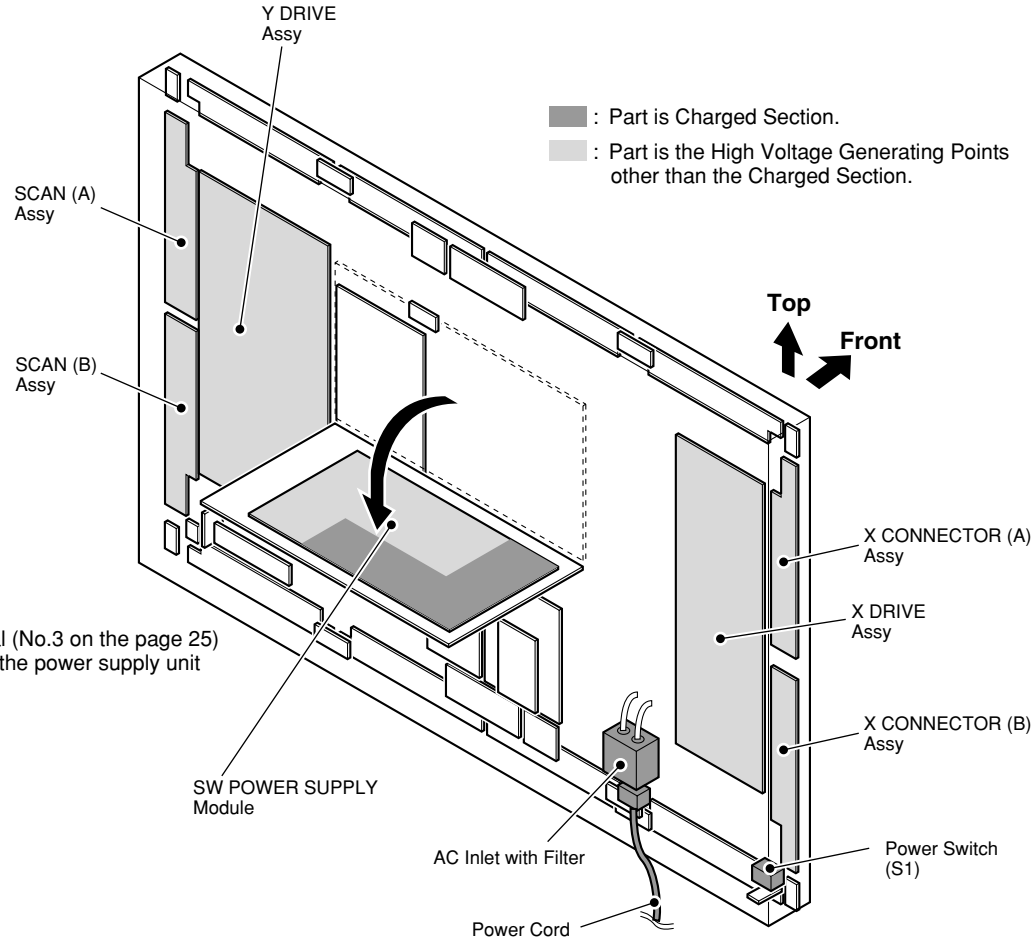
The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the SW POWER SUPPLY Module)
5. STB Transformer and Converter Transformer (In the SW POWER SUPPLY Module)
6. Other primary side of the SW POWER SUPPLY Module

■ High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Module ..... (215V)
2. X DRIVE Assy ..... (–280V to 215V)
3. Y DRIVE Assy ..... (345V)
4. SCAN (A) Assy ..... (345V)
5. SCAN (B) Assy ..... (345V)
6. X CONNECTOR (A) Assy ..... (–280V to 215V)
7. X CONNECTOR (B) Assy ..... (–280V to 215V)



* Remove the IF Earth Metal (No.3 on the page 25) beforehand when inclines the power supply unit as the right figure.

Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

1. SPECIFICATIONS ····· 7
2. EXPLODED VIEWS AND PARTS LIST ····· 8
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM ··· 30
(For SCHEMATIC DIAGRAM, refer to ARP3112)
4. PCB CONNECTION DIAGRAM ··· Refer to ARP3112
5. PCB PARTS LIST ····· 46
6. ADJUSTMENT ····· 57
7. GENERAL INFORMATION ····· 77
7.1 DIAGNOSIS ····· 77
7.1.1 PCB LOCATION ····· 77
7.1.2 SHUT DOWN/POWER DOWN DIAGNOSIS BY LED DISPLAY ····· 78
7.1.3 DISASSEMBLY ····· 85
7.2 IC INFORMATION ····· 89
8. PANEL FACILITIES ····· 108

1. SPECIFICATIONS

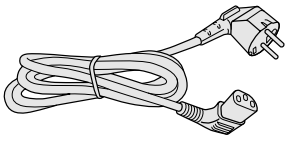
Item	Model: PDP-433PE	Model: PDP-433PU
Number of Pixels	1024 × 768 pixels	
Audio Amplifier	12 W + 12 W (1kHz, 10%, 8Ω)	
Power Requirement	AC 220–240 V, 50/60 Hz, 320 W (0.6 W Standby)	AC 120 V, 60 Hz, 318 W (0.6 W Standby)
Dimensions	1070 (W) × 630 (H) × 98 (D) mm [$42_{1/8}$ (W) × $24_{13/16}$ (H) × $3_{7/8}$ (D) inch]	
Weight	31.5 kg (69.4 lbs)	
Accessories	Power Cord, Cleaning Cloth, Three speed clamps, Three bead bands, Warranty card	

• Design and specifications are subject to change without notice.

• Accessories

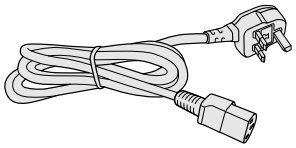
Power cord

(ADG1173) ⚠



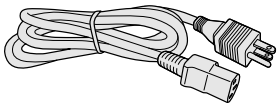
(For Europe, except U.K. and Eire)

(ADG1193) ⚠



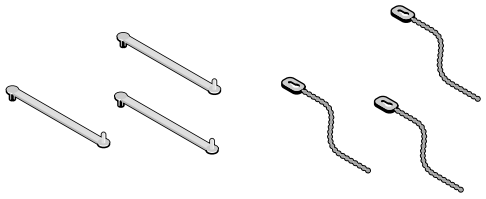
(For U.K., and Eire)

(ADG1178) ⚠

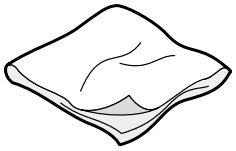


(For North America)

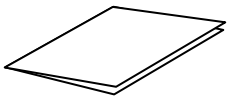
Binder Assy (AEC1908)



Three speed clamps Three bead bands



Cleaning cloth (AED1197)

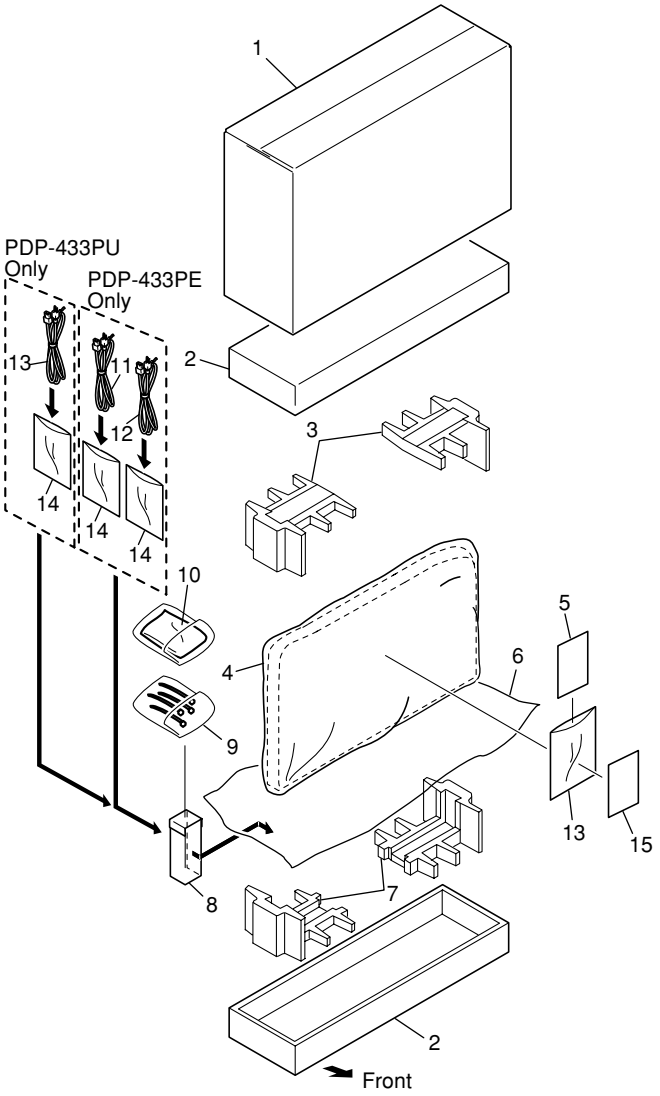


Warranty card

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



(1) PACKING PARTS LIST

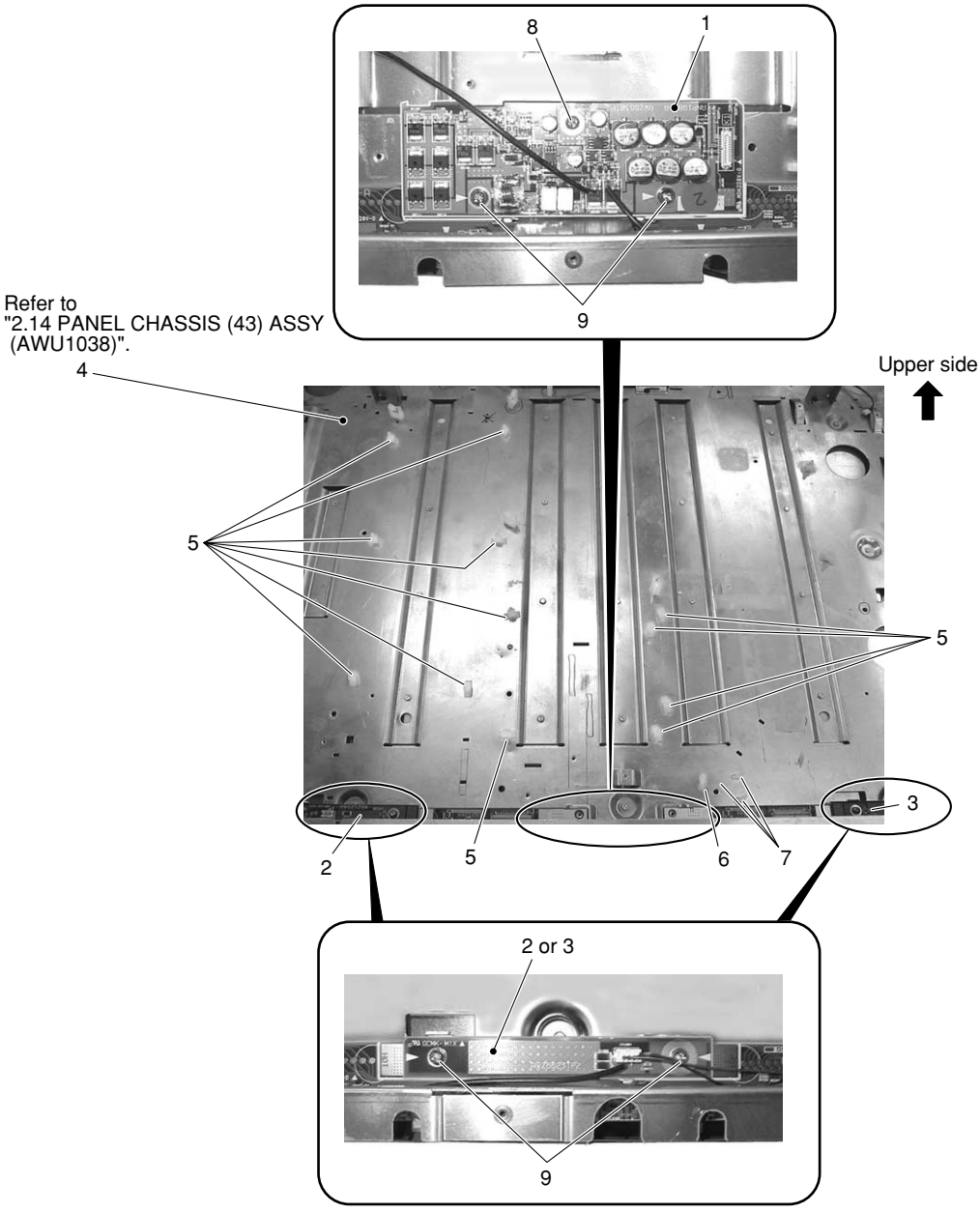
Mark	No.	Description	Part No.
	1	Packing Case (43)	See Contrast table (2)
	2	Carton (43)	AHD3100
	3	Pad (43U)	AHA2282
	4	Mirror Mat	AHG1284
NSP	5	Warranty Card	See Contrast table (2)
	6	Polyethylene Sheet	AHG1302
	7	Pad (43L)	AHA2283
	8	Cord Case	AHC1037
	9	Binder Assy (Speed Clamp ×3, Bead Band ×3)	AEC1908
	10	Wiping Cloth	AED1197
⚠	11	Power Cord	See Contrast table (2)
⚠	12	Power Cord	See Contrast table (2)
⚠	13	Power Cord	See Contrast table (2)
	14	Vinyl Bag	AHG1310
	15	Caution Sheet	ARM1201

(2) CONTRAST TABLE

PDP-433PE/WYVI6 and PDP-433PU/KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433PE /WYVI6	PDP-433PU /KUC	
	1	Packing Case (43)	AHD3114	AHD3115	
NSP	5	Warranty Card	ARY1114	ARY1112	
⚠	11	Power Cord	ADG1173	Not used	
⚠	12	Power Cord	ADG1193	Not used	
⚠	13	Power Cord	Not used	ADG1178	

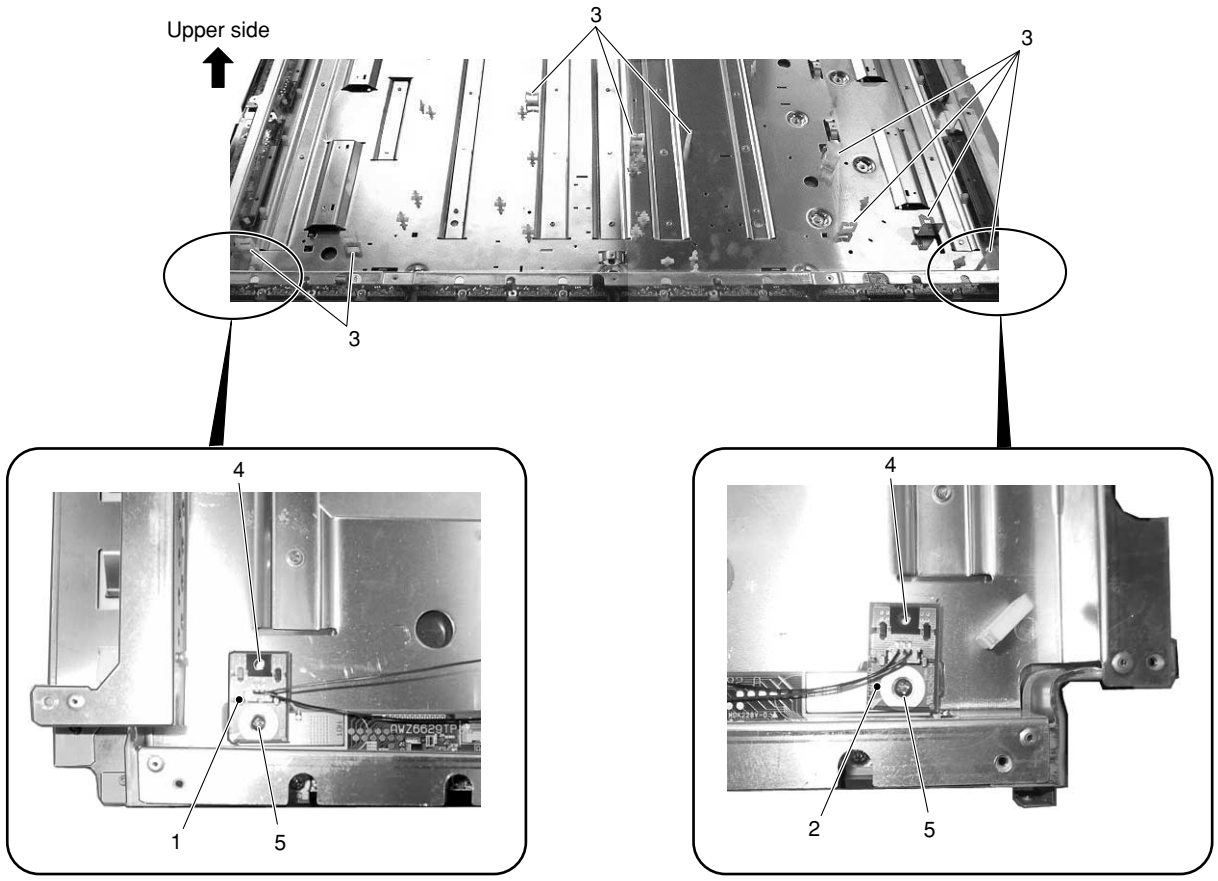
2.2 UNDER LAYER SECTION (1)



● UNDER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
	1	ADR RESONANCE Assy	AWZ6682
NSP	2	BRIDGE C Assy	AWZ6676
NSP	3	BRIDGE D Assy	AWZ6677
	4	Panel Chassis (43) Assy [Refer to "2.14 PANEL CHASSIS (43) ASSY".]	AWU1038
	5	Circuit Board Spacer	AEC1872
	6	PCB Spacer	AEC1253
	7	Circuit Board Spacer	AEC1873
	8	Screw	VBB30P100FNI
	9	Screw	ABA1301

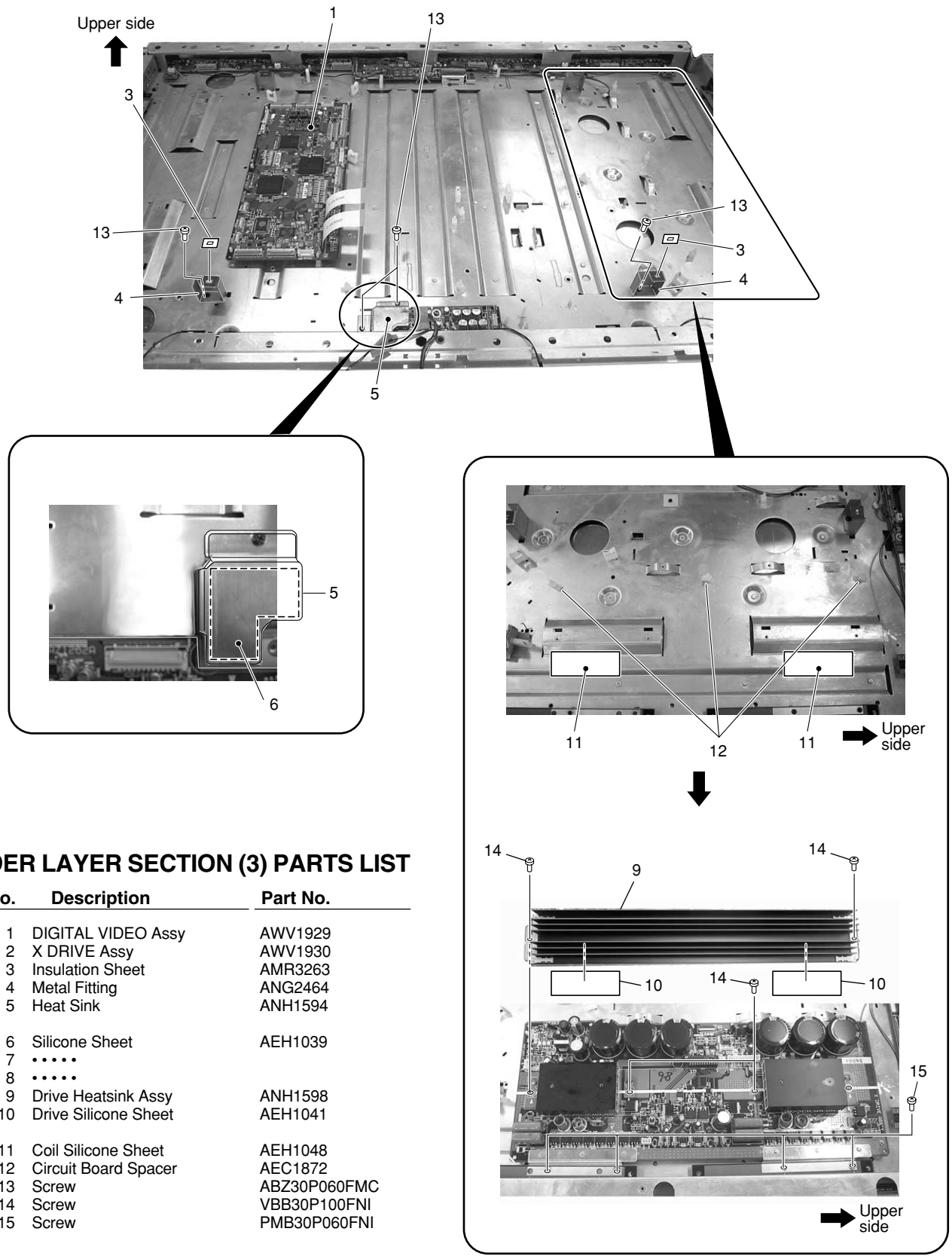
2.3 UNDER LAYER SECTION (2)



● UNDER LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	CLAMP A Assy	AWZ6668
NSP	2	CLAMP B Assy	AWZ6669
	3	Wire Saddle	AEC1904
	4	Locking Card Spacer	AEC1736
	5	Screw	ABA1301

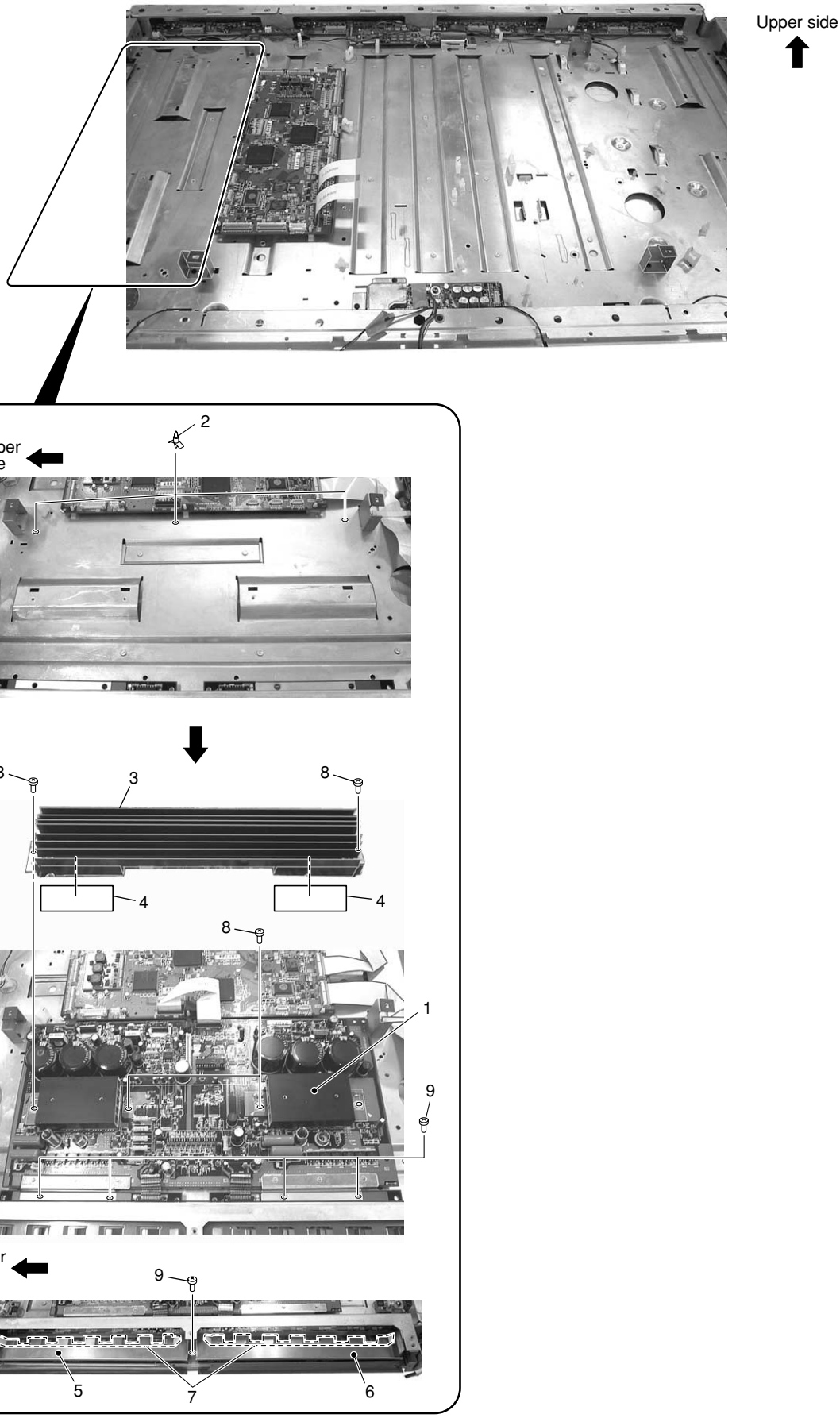
2.4 UNDER LAYER SECTION (3)



● UNDER LAYER SECTION (3) PARTS LIST

Mark	No.	Description	Part No.
	1	DIGITAL VIDEO Assy	AWV1929
	2	X DRIVE Assy	AWV1930
	3	Insulation Sheet	AMR3263
	4	Metal Fitting	ANG2464
	5	Heat Sink	ANH1594
	6	Silicone Sheet	AEH1039
	7	• • • • •	
	8	• • • • •	
	9	Drive Heatsink Assy	ANH1598
	10	Drive Silicone Sheet	AEH1041
	11	Coil Silicone Sheet	AEH1048
	12	Circuit Board Spacer	AEC1872
	13	Screw	ABZ30P060FMC
	14	Screw	VBB30P100FNI
	15	Screw	PMB30P060FNI

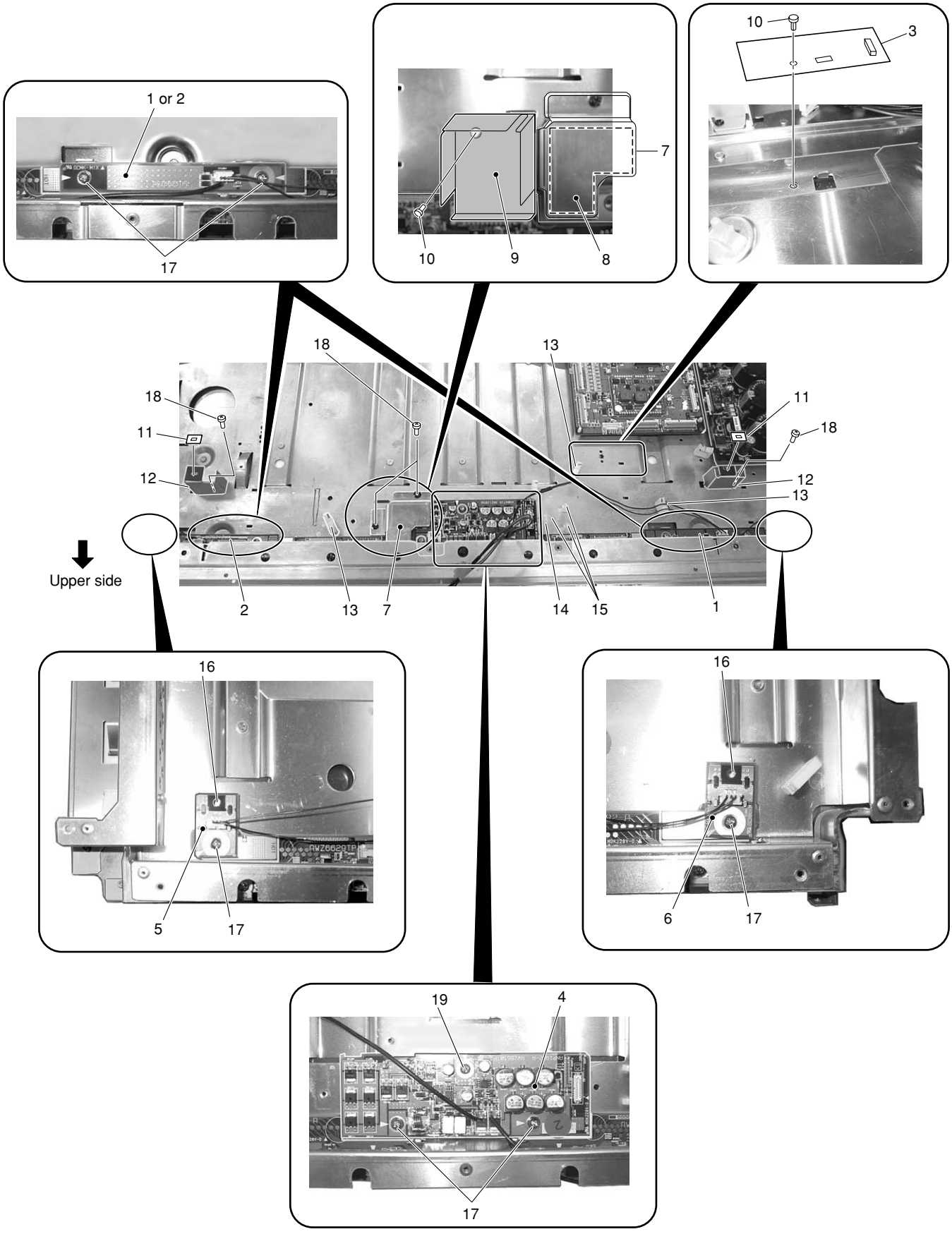
2.5 UNDER LAYER SECTION (4)



● UNDER LAYER SECTION (4) PARTS LIST

Mark	No.	Description	Part No.
	1	Y DRIVE Assy	AWZ6683
	2	Circuit Board Spacer	AEC1872
	3	Drive Heatsink Assy	ANH1598
	4	Drive Silicone Sheet	AEH1041
	5	Scan IC Spring (43L)	ABK1029
	6	Scan IC Spring (43R)	ABK1030
	7	Scan Insulation Sheet (43)	AMR3287
	8	Screw	VBB30P100FNI
	9	Screw	PMB30P060FNI

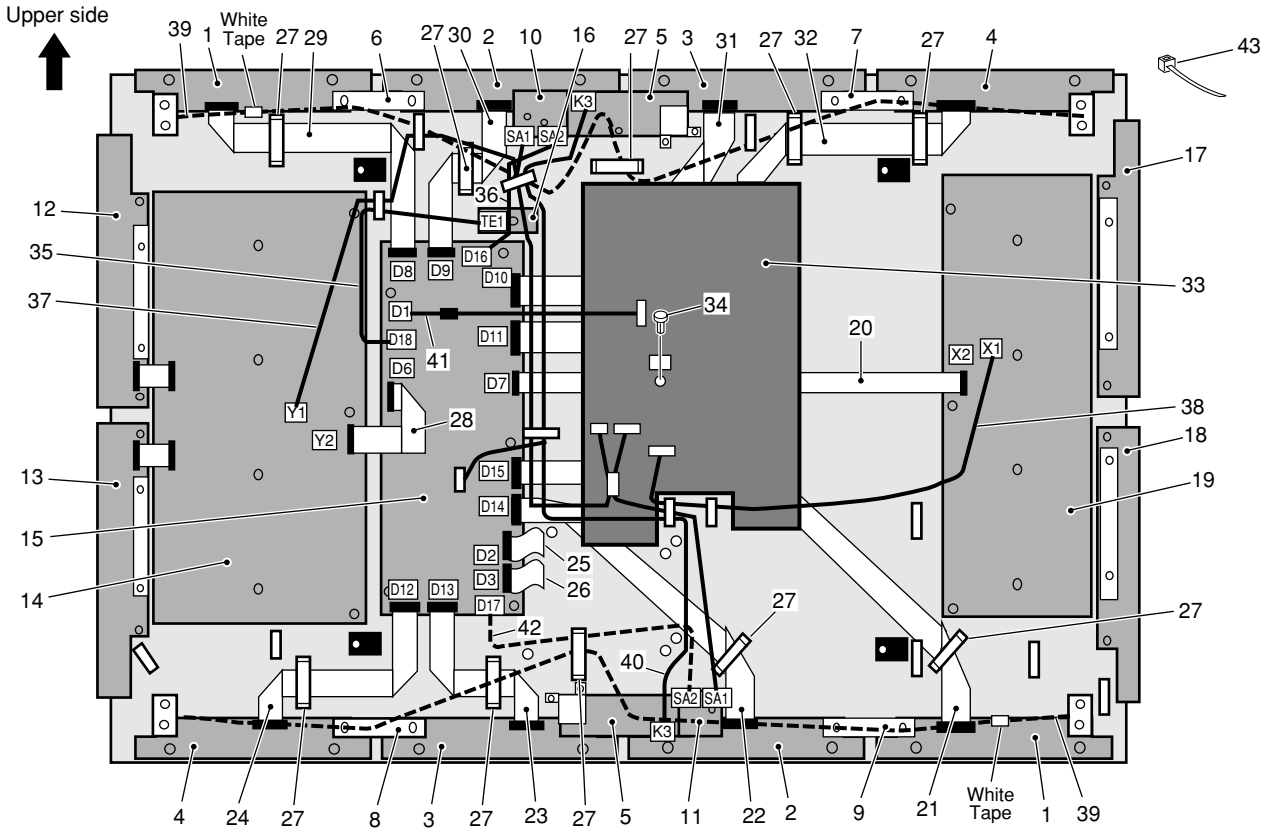
2.6 UNDER LAYER SECTION (5)



● UNDER LAYER SECTION (5) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	BRIDGE A Assy	AWZ6674
NSP	2	BRIDGE B Assy	AWZ6675
	3	THERMAL SENSOR Assy	AWZ6660
	4	ADR RESONANCE Assy	AWZ6682
NSP	5	CLAMP A Assy	AWZ6668
NSP	6	CLAMP B Assy	AWZ6669
	7	Heat Sink	ANH1594
	8	Silicone Sheet	AEH1039
	9	FFC Holder	AMR3302
	10	Rivet	BEC1066
	11	Insulation Sheet	AMR3263
	12	Metal Fitting	ANG2464
	13	Wire Saddle	AEC1904
	14	PCB Spacer	AEC1253
	15	Circuit Board Spacer	AEC1873
	16	Locking Card Spacer	AEC1736
	17	Screw	ABA1301
	18	Screw	ABZ30P060FMC
	19	Screw	VBB30P100FNI

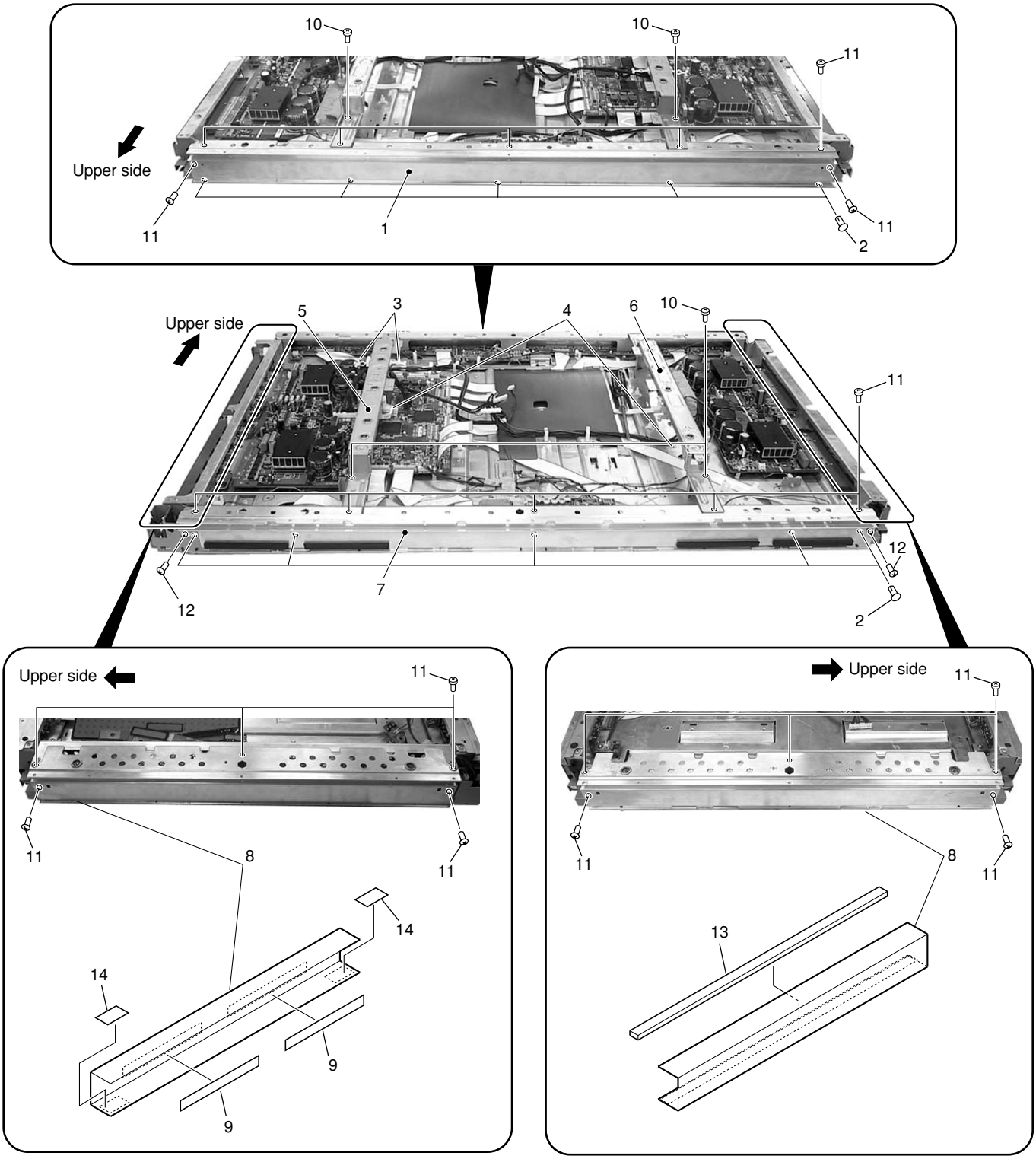
2.7 UNDER LAYER SECTION (6)



● UNDER LAYER SECTION (6) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	ADR CONNECT A Assy	AWZ6678
NSP	2	ADR CONNECT B Assy	AWZ6679
NSP	3	ADR CONNECT C Assy	AWZ6680
NSP	4	ADR CONNECT D Assy	AWZ6681
	5	ADR RESONANCE Assy	AWZ6682
NSP	6	BRIDGE A Assy	AWZ6674
NSP	7	BRIDGE B Assy	AWZ6675
NSP	8	BRIDGE C Assy	AWZ6676
NSP	9	BRIDGE D Assy	AWZ6677
	10	SUB ADDRESS A Assy	AWZ6692
	11	SUB ADDRESS B Assy	AWZ6693
NSP	12	SCAN (A) Assy	AWZ6666
NSP	13	SCAN (B) Assy	AWZ6667
	14	Y DRIVE Assy	AWZ6683
	15	DIGITAL VIDEO Assy	AWV1929
	16	THERMAL SENSOR Assy	AWZ6660
NSP	17	X CONNECTOR (A) Assy	AWZ6672
NSP	18	X CONNECTOR (B) Assy	AWZ6673
	19	X DRIVE Assy	AWV1930
	20	J204 Flexible Flat Cable	ADD1207
	21	J209 Flexible Flat Cable	ADD1206
	22	J210 Flexible Flat Cable	ADD1204
	23	J211 Flexible Flat Cable	ADD1199
	24	J212 Flexible Flat Cable	ADD1201
	25	J201 Flexible Flat Cable	ADD1194
	26	J202 Flexible Flat Cable	ADD1194
	27	Flat Clamp	AEC1879
	28	J203 Flexible Flat Cable	ADD1198
	29	J205 Flexible Flat Cable	ADD1202
	30	J206 Flexible Flat Cable	ADD1200
	31	J207 Flexible Flat Cable	ADD1208
	32	J208 Flexible Flat Cable	ADD1205
	33	Power Sheet (43)	AMR3284
	34	Rivet	BEC1066
	35	J110 3P Housing Wire	ADX2741
	36	J108 8P Housing Wire	ADX2740
	37	J102 Wire PE	ADX2738
	38	J103 13P Housing Wire	ADX2766
	39	J116,J117 4P Housing Wire	ADX2767
	40	J120 Wire L	ADX2763
	41	J101 13P Housing Wire	ADX2768
	42	J109 8P Housing Wire	ADX2743
	43	Nylon Binder	AEC-093

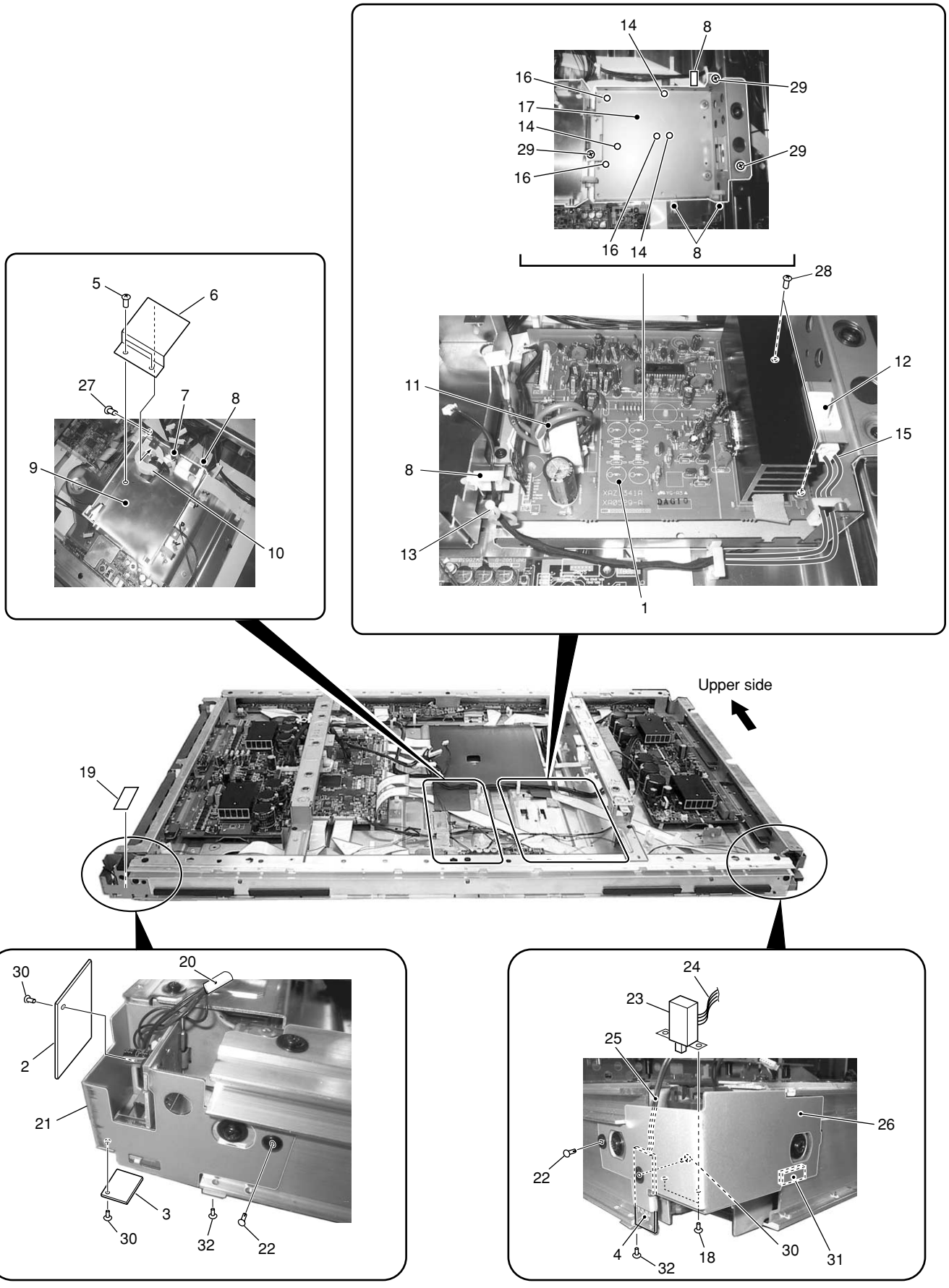
2.8 MIDDLE LAYER SECTION (1)



● MIDDLE LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Front Chassis HU (43)	ANA1670
NSP	2	Card Spacer	AEC1902
	3	Niplocker	AEC1803
	4	Card Corner Holder	BEC1144
NSP	5	Sub Frame L	ANG2483
NSP	6	Sub Frame R	ANG2484
NSP	7	Front Chassis HL (43)	ANA1671
NSP	8	Front Chassis V (43)	ANA1672
	9	FPC Cushion (43)	AEB1371
	10	Screw	ABA1283
	11	Screw	ABA1294
	12	Screw	BMZ30P060FMC
	13	VR Cushion	AEB1374
	14	V Cushion	AED1205

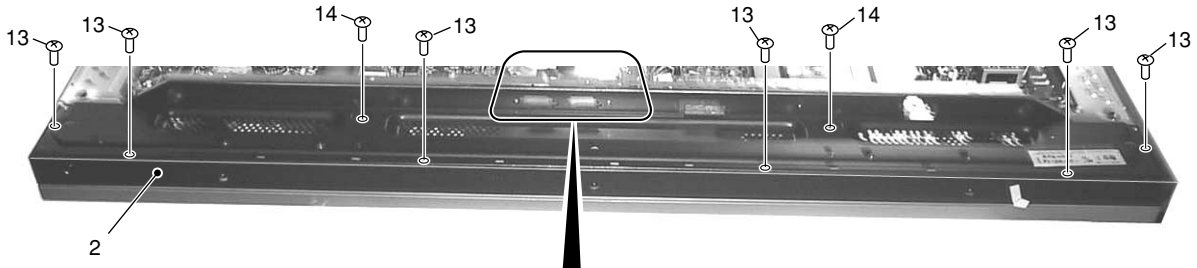
2.9 MIDDLE LAYER SECTION (2)

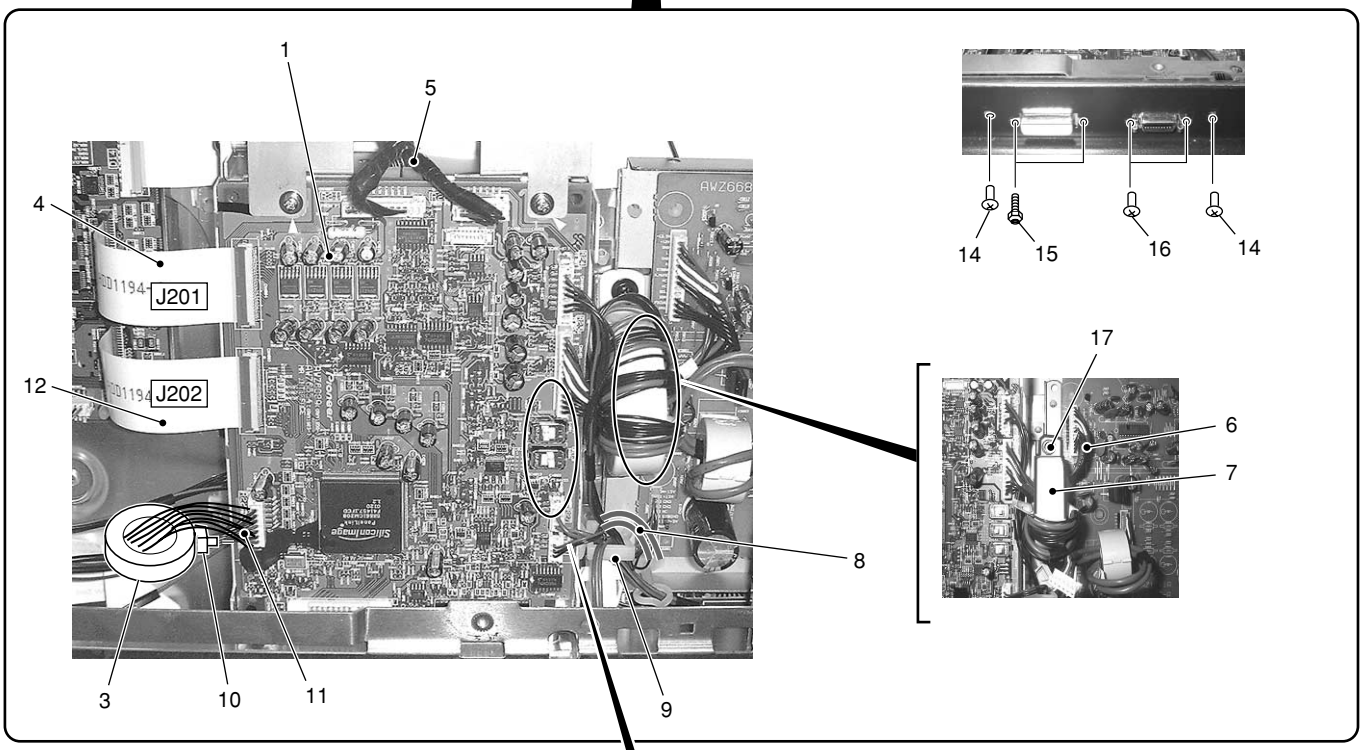


● MIDDLE LAYER SECTION (2) PARTS LIST

Mark	No.	Description	Part No.
	1	AUDIO AMP Assy	AWZ6687
	2	FRONT KEY CONN Assy	AWZ6657
	3	IR (P) Assy	AWZ6658
	4	LED Assy	AWZ6655
	5	Nylon Rivet	AEP-211
	6	IF Sheet	AMR3298
	7	Edge Saddle	AEC1571
	8	Wire Saddle	AEC1745
	9	IF Shield	ANA1675
	10	L2 Toroidal Core	ATX1042
	11	J214 3P Housing Wire	ADX2735
	12	S2 Power Switch	ASG1089
	13	Niplocker	BEC1136
	14	PCB Spacer	AEC1570
	15	J215 3P Housing Wire	ADX2757
	16	Spacer	AEC1360
	17	Audio Base	ANA1687
	18	Screw	BMZ30P060FZK
	19	V Cushion	AED1205
	20	J113 Wire PJ	ADX2742
NSP	21	IR Holder	ANG2494
	22	Nylon Rivet	AEC1671
⚠	23	S1 Power Switch	ASG1082
	24	J106 Wire PC	ADY2745
	25	J104 3P Housing Wire	ADX2748
NSP	26	Switch Holder	ANG2493
	27	Screw	ABA1294
	28	Screw	PMB30P060FNI
	29	Screw	AMZ30P060FZK
	30	Screw	BMZ30P040FMC
	31	Gascket R	ANK1695
	32	Screw	ABZ30P050FZK

2.10 UPPER LAYER SECTION (1)



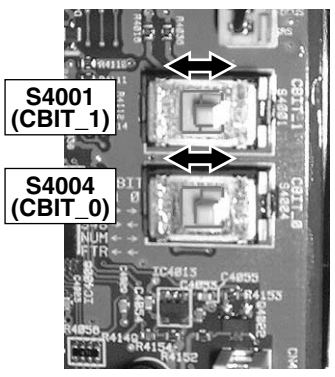


■ Caution in the MR INTERFACE Assy Replacement

Set the slide switches in accordance with applicabe model when replacing the MR INTERFACE Assy.

	S4001 CBIT_1	**S4004** CBIT_0
PDP-4333P	→	→
PDP-433PE	←	→
PDP-433PU	→	→

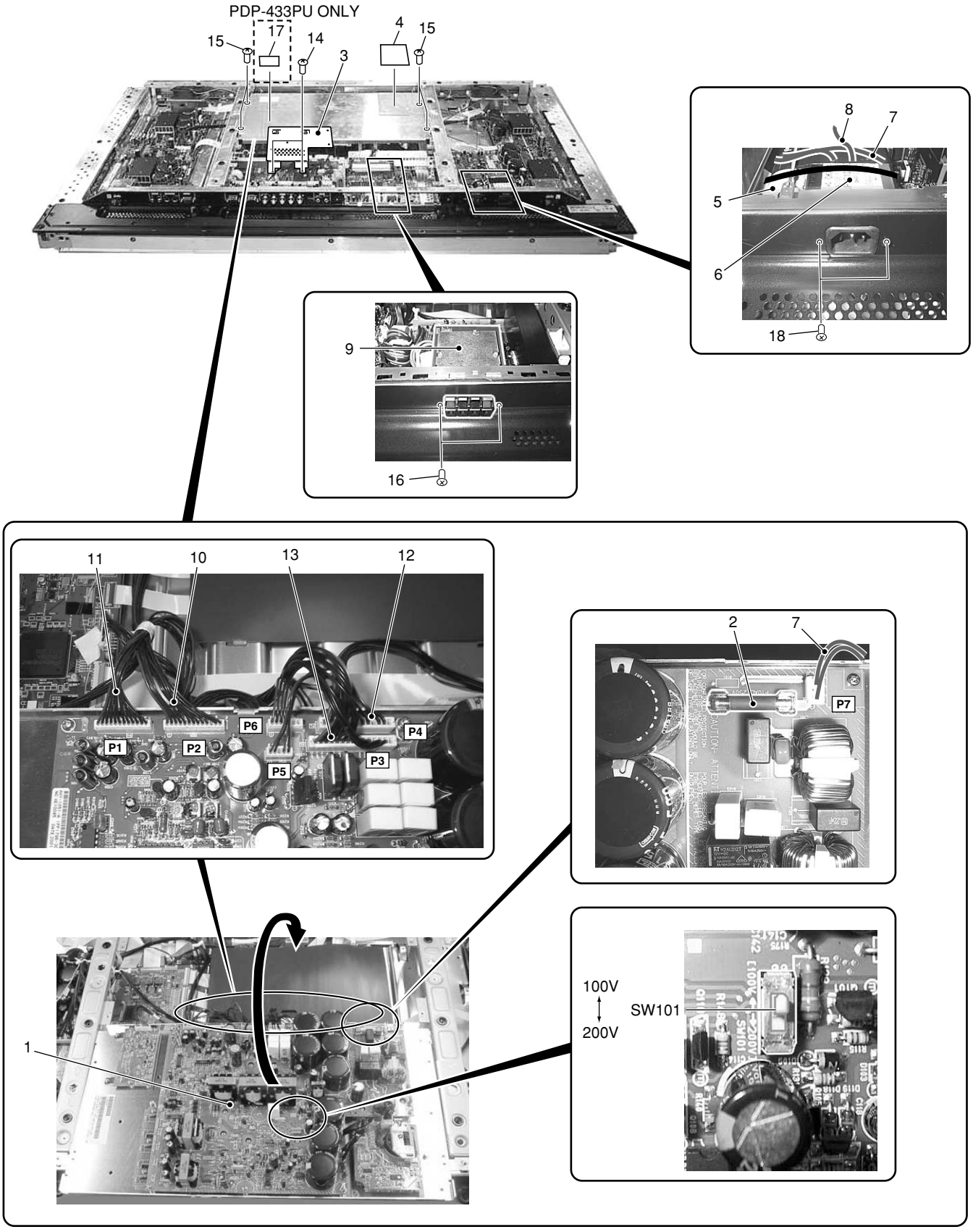
Note 1: When there is not S4004, set only S4001.
Note 2: When there are not S4001 and S4004, setting is unnecessary.



● UPPER LAYER SECTION (1) PARTS LIST

Mark	No.	Description	Part No.
	1	MR INTERFACE Assy	AWZ6654
	2	Terminal Panel (HD)	ANG2485
	3	L6 Ferrite Core	ATX1037
	4	J201 Flexible Flat Cable	ADD1194
	5	J118 Wire P	ADX2765
	6	J111 14P Housing Wire	ADX2730
	7	L3 Toroidal Core	ATX1042
	8	J214 3P Housing Wire	ADX2735
	9	J104 3P Housing Wire	ADX2748
	10	Ferrite Core Holder	AEC1818
	11	J113 Wire PJ	ADX2742
	12	J202 Flexible Flat Cable	ADD1194
	13	Screw	TBZ40P080FZK
	14	Screw	AMZ30P060FZK
	15	Screw	BBA1051
	16	Screw	PMZ26P030FZK
	17	Screw	ABA1294

2.11 UPPER LAYER SECTION (2)



(1) UPPER LAYER SECTION (2) PARTS LIST

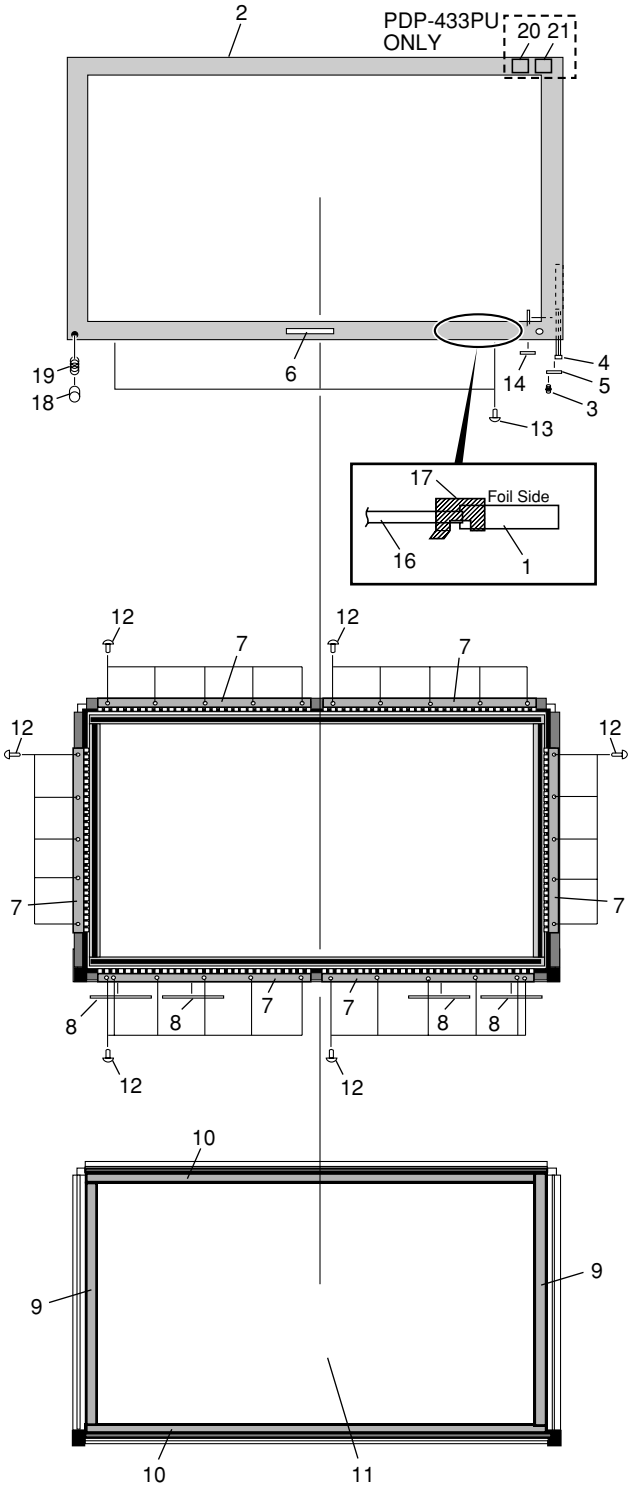
Mark	No.	Description	Part No.
⚠	1	SW Power Supply Module	AXY1056
⚠	2	FU1 Fuse (10A)	See Contrast table (2)
	3	IF Earth Metal	ANA1690
	4	Silicone Sheet P	AEH1035
⚠	5	L1 Ferrite Core	ATX1032
⚠	6	CN1 AC Inlet with Filter	AKP1223
	7	J105 Wire PB	ADX2744
	8	J114 Earth Wire	ADX2709
	9	SP TERMINAL Assy	AWZ6688
	10	J101 13P Housing Wire	ADX2768
	11	J118 Wire P	ADX2765
	12	J103 13P Housing Wire	ADX2766
	13	J102 Wire PE	ADX2738
	14	Screw	PMB30P060FNI
	15	Screw	AMZ30P060FZK
	16	Screw	BPZ30P080FZK
	17	Solder Warning Label	See Contrast table (2)
	18	Screw	BMZ30P060FZK

(2) CONTRAST TABLE

PDP-433PE/WYVI6 and PDP-433PU/KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433PE /WYVI6	PDP-433PU /KUC	
⚠	2	FU1 Fuse (10A/400V)	AEK1071	Not used	
⚠	2	FU1 Fuse (10A/125V)	Not used	AEK1069	
	17	Solder Warning Label	Not used	AAX2644	

2.12 FRONT CASE SECTION



(1) FRONT CASE SECTION PARTS LIST

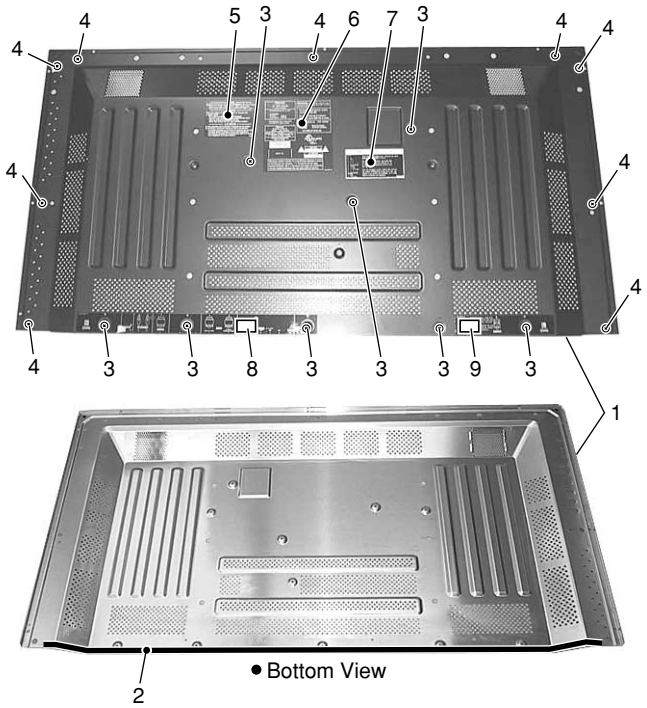
Mark	No.	Description	Part No.
	1	FRONT KEY Assy	AWZ6656
	2	Front Case Assy 43 (P)	AMB2725
	3	Rivet	AEC1877
⚠	4	L5 Ferrite Core	ATX1043
	5	Lead Cover (P)	AMB2704
	6	Pioneer Badge	AAM1091
NSP	7	Panel Holder (43)	ANG2487
	8	Spacer	AEC1896
	9	Panel Cushion V (43)	AED1201
	10	Panel Cushion H (43)	AED1200
	11	Protect Panel Assy (43)	AMR3303
	12	Screw	ABZ30P050FZK
	13	Screw	VMZ30P060FZK
	14	Serial Sheet	AAX2609
	15	• • • • •	
	16	J213 Flexible Flat Cable	ADD1193
NSP	17	Flexible Seal (P)	AEH1052
	18	Power Button	AAD4113
	19	Coil Spring	ABH1108
	20	Energy Star Label	See Contrast table (2)
	21	HDTV Label	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433PE/WYVI6 and PDP-433PU/KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433PE /WYVI6	PDP-433PU /KUC	
	20	Energy Star Label	Not used	AAX2865	
	21	HDTV Label	Not used	AAX2891	

2.13 REAR SECTION



(1) REAR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Rear Case (P)	ANE1600
	2	Gascket A	ANK1694
	3	Screw	AMZ30P060FZK
	4	Screw	TBZ40P080FZK
	5	Cleaning Label	AAX2751
NSP	6	Name Label	See Contrast table (2)
	7	Bolt Caution Label	AAX2852
	8	Terminal Display Label P	AAX2858
	9	Terminal Display Label L (E)	See Contrast table (2)

(2) CONTRAST TABLE

PDP-433PE/WYVI6 and PDP-433PU/KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			PDP-433PE /WYVI6	PDP-433PU /KUC	
NSP	6	Name Label	AAL2368	AAL2369	
	9	Terminal Display Label L (E)	AAX2860	Not used	
	9	Terminal Display Label L	Not used	AAX2859	

2.14 PDP SERVICE ASSY 433 (AWU1043)

PDP Service Assy 433 (AWU1043) consists of the following parts.

● PARTS LIST

Mark	No.	Description	Part No.
		Panel Chassis (43) Assy	AWU1038
NSP		Front Chassis V (43)	ANA1672
NSP		Front CHassis HU (43)	ANA1670
NSP		Front Chassis HL	ANA1692
NSP		Sub Frame L (43)	ANG2483
NSP		Sub Frame R (43)	ANG2484
		Scan IC Spring (43L)	ABK1029
		Scan IC Spring (43R)	ABK1030
NSP		Metal Fitting	ANG2464
		FPC Cushion (43)	AEB1371
NSP		PCB Spacer	AEC1211
		Locking Card Spacer	AEC1736
		Circuit Board Spacer	AEC1872
		Circuit Board Spacer	AEC1873
		Spacer	AEC1896
NSP		Card Spacer	AEC1902
		Wire Saddle	AEC1904
		Panel Cushion H (43)	AED1200
		Panel Cushion V (43)	AED1201
		V Cushion	AED1205
		Insullation Sheet	AMR3263
		Scan Sheet (43)	AMR3287
		Card Corner Holder	BEC1144
		Screw	ABA1283
		Screw	ABA1294
		Screw	ABZ30P060FMC
		Screw	BMZ30P060FMC
		Screw	PMB30P060FNI
		Screw	VBB30P100FNI
		Bolt	ABA1259
		Corner Pad	AHA2293
		Upper Carton	AHD3139
		Under Carton	AHD3140
		Packing Sheet	AHG1291
		Washer	WB80FZB
		VR Cushion	AEB1374
		Niplocker	AEC1803
		Static Plate	AHK1013
		Plate	AHK1014
		Screw	BYC40P220FMC
		Washer	WC60FZK

2.15 PANEL CHASSIS (43) ASSY (AWU1038)

Panel Chassis (43) Assy (AWU1038) consists of the following parts.

● PARTS LIST

Mark	No.	Description	Part No.	
NSP		SCAN FUKUGO ASSY	AWV1927	*
NSP		ADDRESS FUKUGO ASSY	AWV1928	*
NSP		Address Module (IC1 - IC32)	AXF1110	
NSP		FPC (J1,J2)	ADY1079	
NSP		FPC (J3,J4)	ADY1080	
NSP		Chassis Assy (43)	ANA1693	
NSP		├─Chassis (43)	ANA1668	
NSP		├─Base Chassis (43)	ANA1669	
NSP		├─Scan Heatsink (43)	ANH1601	
NSP		├─Corner Angle A	ANG2457	
NSP		├─Corner Angle B	ANG2458	
NSP		├─Tube Cover	AMR3262	
		├─Silicone Sheet 43	AEH1043	
		├─Adhesive Tape 43	AEH1044	
		├─Adhesive Tape B 43	AEH1054	
		├─Panel Silicone Sheet	AEH1055	
		└─Silicone Sheet B 43	AEH1056	
		Pin Grommet	AEC1015	
		Card Spacer	AEC1889	
		Scan Silicone Sheet (43)	AEH1047	
NSP		Plasma Panel Assy (43)	AAV1239	
		Screw	VBB30P100FNI	

● LIST OF ASSY

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1927
NSP		├─ SCAN (A) ASSY	AWZ6666
NSP		├─ SCAN (B) ASSY	AWZ6667
NSP		├─ X CONNECTOR (A) ASSY	AWZ6672
NSP		├─ X CONNECTOR (B) ASSY	AWZ6673
NSP		├─ BRIDGE A ASSY	AWZ6674
NSP		├─ BRIDGE B ASSY	AWZ6675
NSP		├─ BRIDGE C ASSY	AWZ6676
NSP		└─ BRIDGE D ASSY	AWZ6677
		ADDRESS FUKUGO ASSY	AWV1928
NSP		├─ CLAMP A Assy	AWZ6668
NSP		├─ CLAMP B Assy	AWZ6669
NSP		├─ ADR CONNECT A ASSY	AWZ6678
NSP		├─ ADR CONNECT B ASSY	AWZ6679
NSP		├─ ADR CONNECT C ASSY	AWZ6680
NSP		├─ ADR CONNECT D ASSY	AWZ6681
		└─ ADR RESONANCE ASSY	AWZ6682

■ Caution in Replacement of Chassis Block

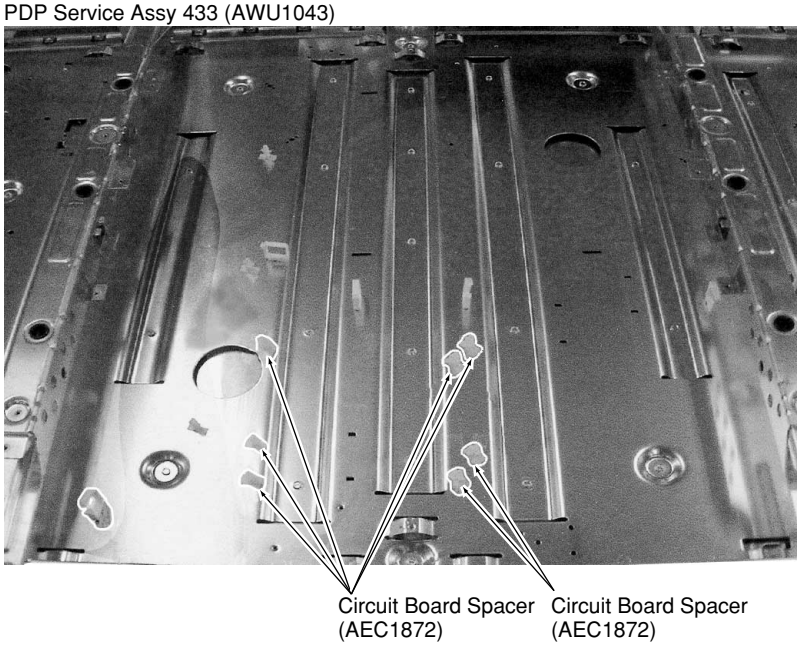
Please order the PDP Service Assy 433 (AWU1043) when replacing the Chassis block.
PDP Service Assy 433 is all common use parts of for business, public use and module.
Supply it by the state that installed Circuit Board Spacer (AEC1872) and Wire Saddle (AEC1904) as follows.
Therefore need to remove it in accordance with model.

Confirm character carved a seal near the parts, and remove it.

P : Public exclusive use
W : Module exclusive use
PW : Common use of public use and module

∗ In case of this unit, the parts that "W" is marked removes.

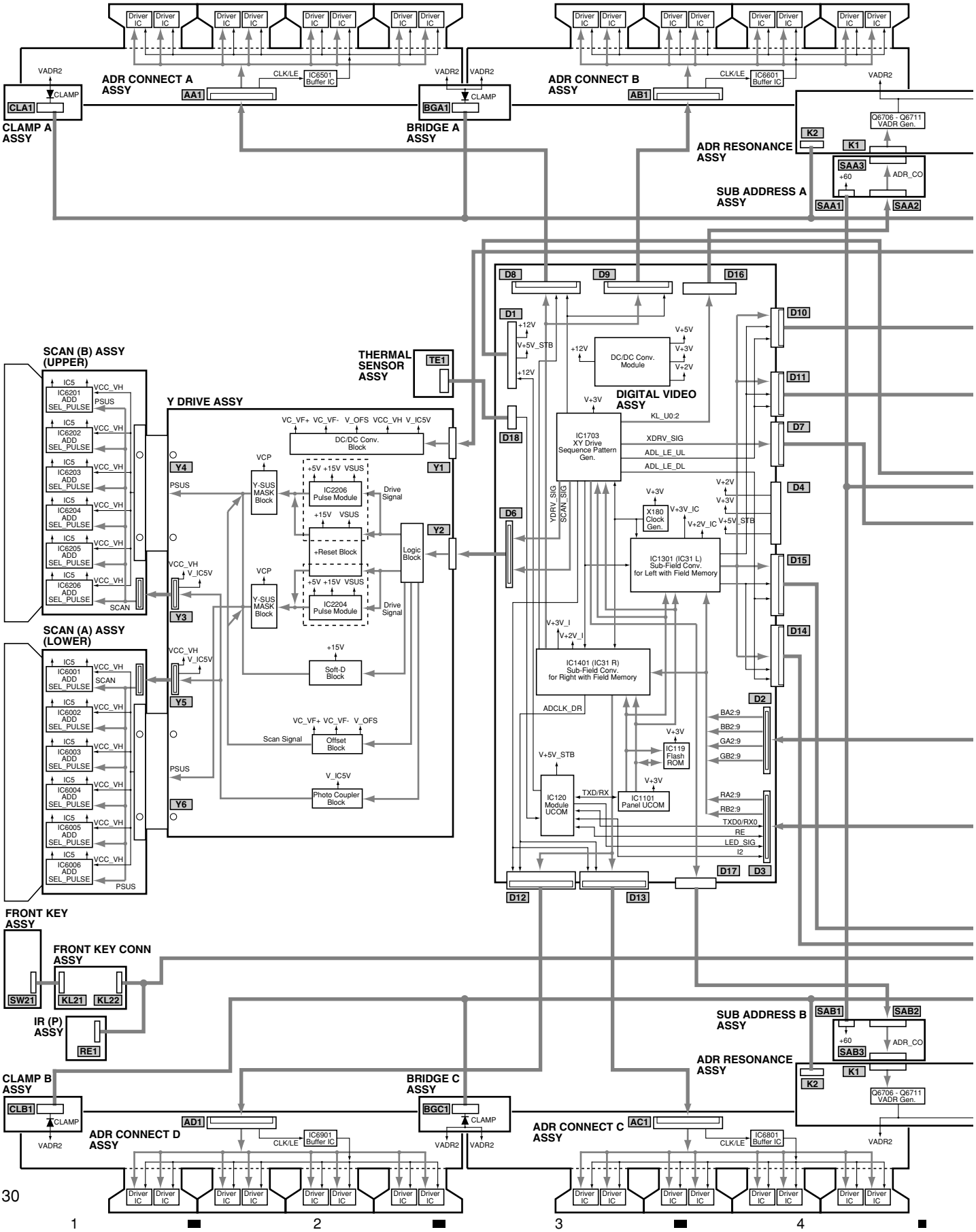
PDP Service Assy 433 (AWU1043)



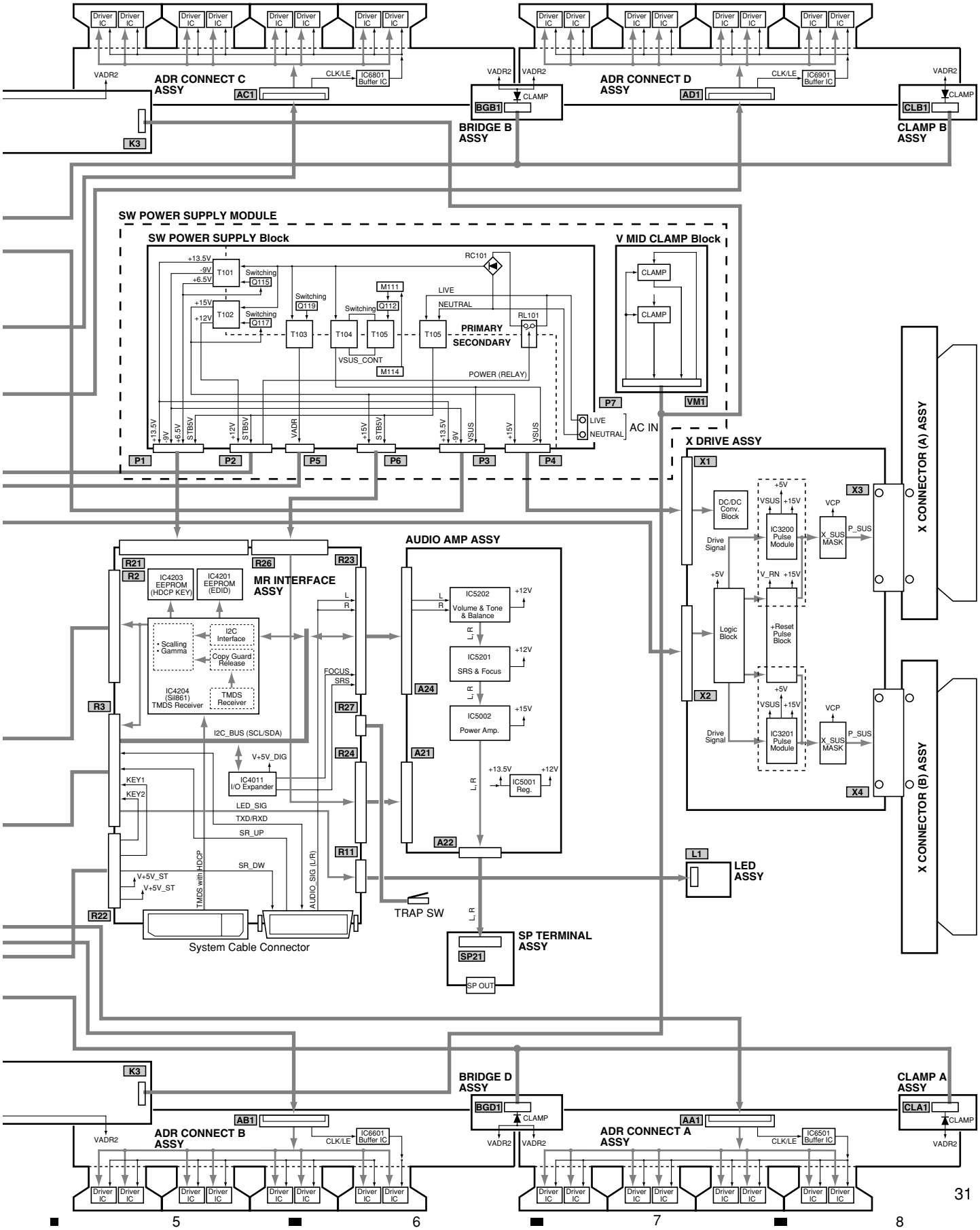
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

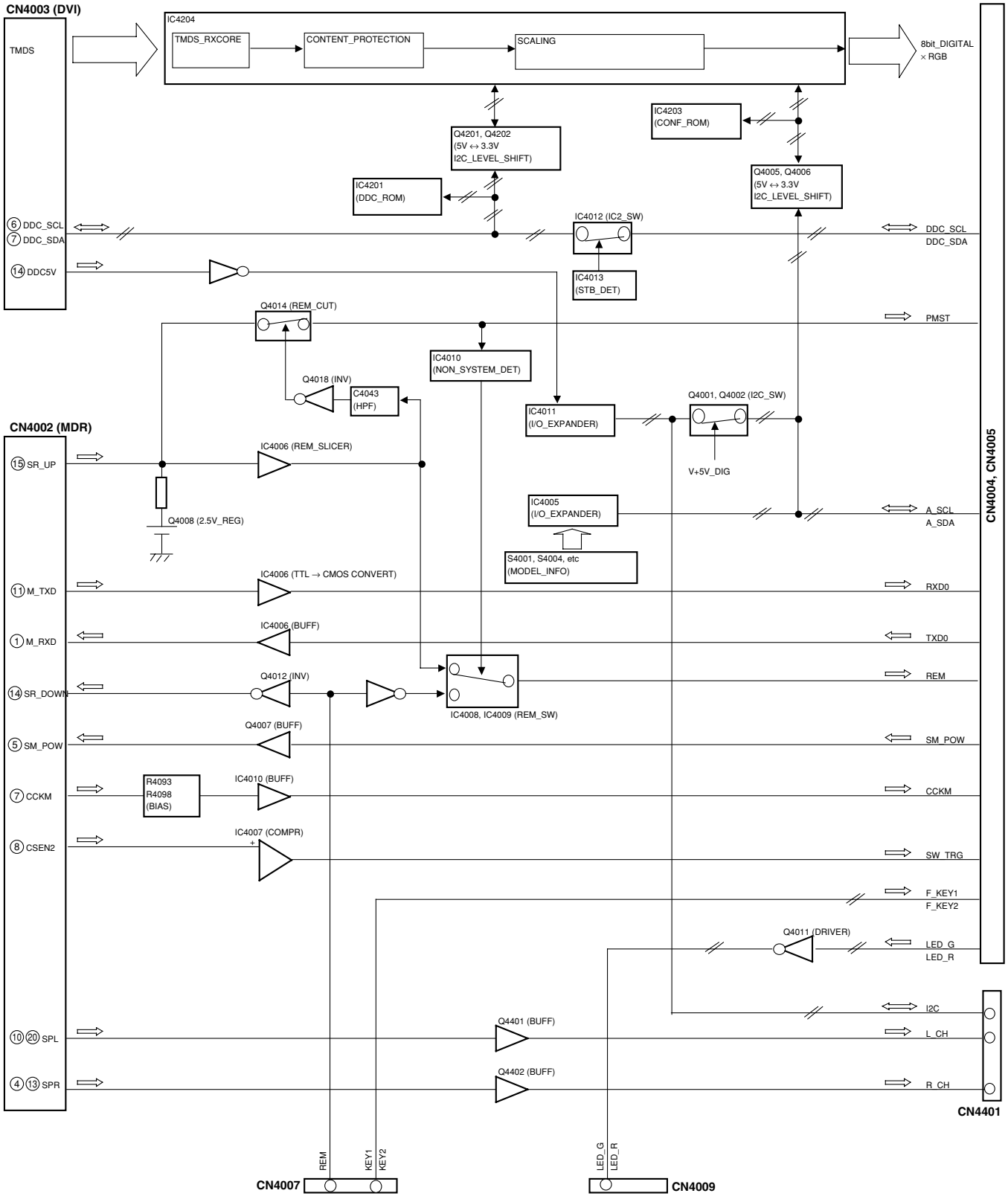
3.1.1 OVERALL DIAGRAM



Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



3.1.2 MR INTERFACE ASSY



● Voltages

CN4002 (MDR Connector) (↔ Media Receiver)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	M_RXD	232C bus (PDP → MR)	0-5V swing square wave
2	GND		
3	SENCE	Connecting detection for MR	0.0V DC
4	SPR	Audio signal R ch	Analog audio signal wave
5	SMPOW	MR relay control	3.5V DC
6	GND		
7	CCKM	System activation detection	1.9V DC
8	CSEN2	System activation signal	5.0V DC
9	CSEN1	Not used	
10	SPL	Audio signal L ch	Analog audio signal wave
11	M_TXD	232C bus (MR → PDP)	0-3.3V swing square wave
12	GND		
13	SPR	Audio signal R ch	Analog audio signal wave
14	SR_DW	Remote control signal	5.0V DC
15	SR_UP	MDR connecting detection signal multiplex remote control signal	3.75V DC
16	GND		
17	FRASH_W	Not used	
18	SRST	Not used	
19	GND		
20	SPL	Audio signal L ch	Analog audio signal wave

CN4003 (DVI Connector) (↔ Media Receiver)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	RX2-	DVI signal	DVI signal
2	RX2+	DVI signal	DVI signal
3	GND		
4	NC		
5	NC		
6	DDC_SCL	I2C for DDC	0-5V swing square wave
7	DDC_SDA	I2C for DDC	0-5V swing square wave
8	NC		
9	RX1-	DVI signal	DVI signal
10	RX1+	DVI signal	DVI signal
11	GND		
12	NC		
13	NC		
14	DDC_+5V	I2C power supply for DDC	5.0V DC
15	GND		
16	HPD	HOT_PLUG detection	5.0V DC
17	RX0-	DVI signal	DVI signal
18	RX0+	DVI signal	DVI signal
19	GND		
20	NC		
21	NC		
22	GND		
23	RXC+	DVI signal	DVI signal
24	RXC-	DVI signal	DVI signal

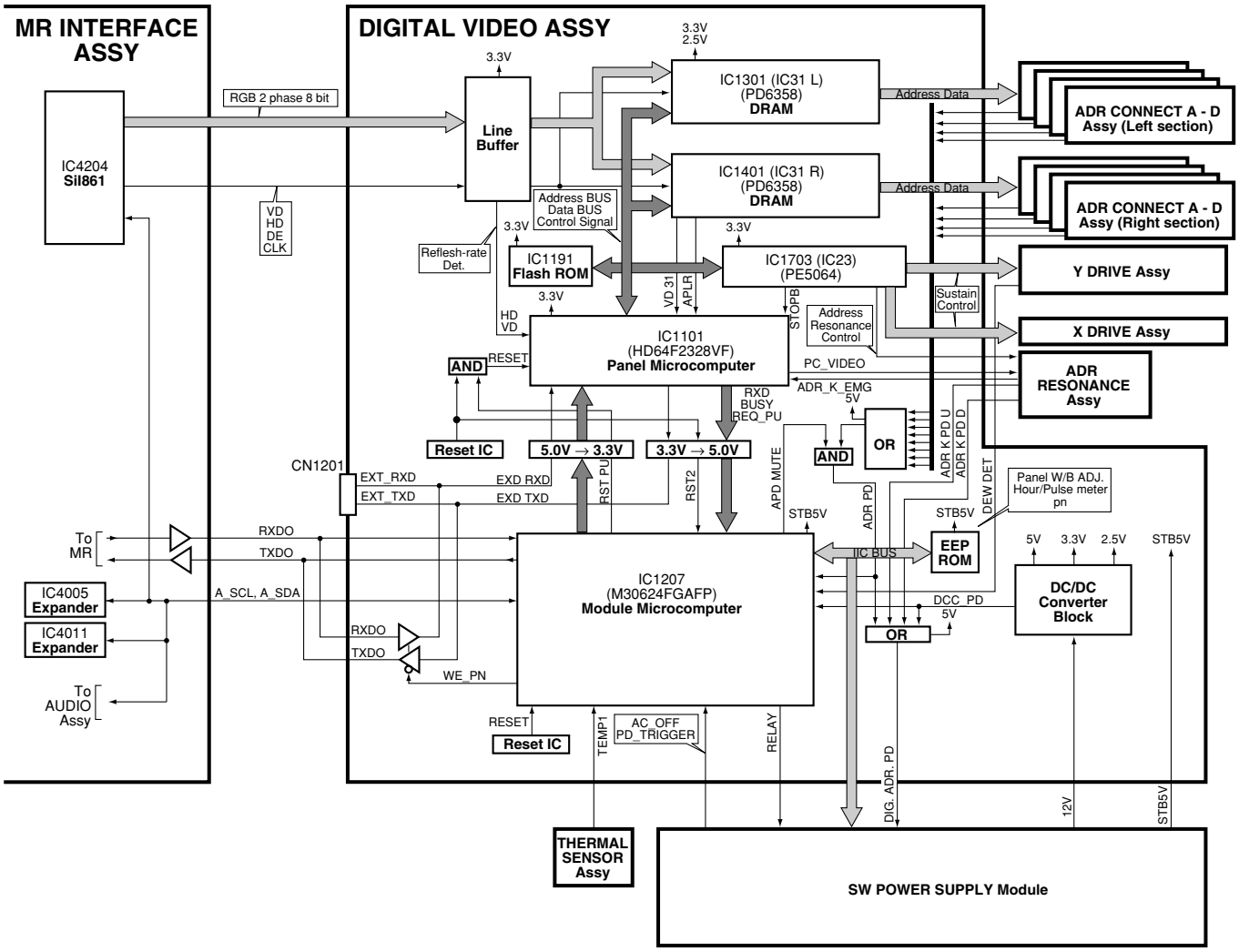
CN4004 (50P_FFC Connector) (↔ DIGITAL VIDEO Assy)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	GND		
2	GND		
3	NC		
4	NC		
5	NC		
6	NC		
7	BB0	8 bit video signal	0-3.3V swing square wave
8	BA0	8 bit video signal	0-3.3V swing square wave
9	BB1	8 bit video signal	0-3.3V swing square wave
10	BA1	8 bit video signal	0-3.3V swing square wave
11	BB2	8 bit video signal	0-3.3V swing square wave
12	BA2	8 bit video signal	0-3.3V swing square wave
13	BB3	8 bit video signal	0-3.3V swing square wave
14	BA3	8 bit video signal	0-3.3V swing square wave
15	BB4	8 bit video signal	0-3.3V swing square wave
16	BA4	8 bit video signal	0-3.3V swing square wave
17	BB5	8 bit video signal	0-3.3V swing square wave
18	BA5	8 bit video signal	0-3.3V swing square wave
19	BB6	8 bit video signal	0-3.3V swing square wave
20	BA6	8 bit video signal	0-3.3V swing square wave
21	BB7	8 bit video signal	0-3.3V swing square wave
22	BA7	8 bit video signal	0-3.3V swing square wave
23	GND		
24	GND		
25	NC		
26	NC		
27	NC		
28	NC		
29	GB0	8 bit video signal	0-3.3V swing square wave
30	GA0	8 bit video signal	0-3.3V swing square wave
31	GB1	8 bit video signal	0-3.3V swing square wave
32	GA1	8 bit video signal	0-3.3V swing square wave
33	GB2	8 bit video signal	0-3.3V swing square wave
34	GA2	8 bit video signal	0-3.3V swing square wave
35	GB3	8 bit video signal	0-3.3V swing square wave
36	GA3	8 bit video signal	0-3.3V swing square wave
37	GB4	8 bit video signal	0-3.3V swing square wave
38	GA4	8 bit video signal	0-3.3V swing square wave
39	GB5	8 bit video signal	0-3.3V swing square wave
40	GA5	8 bit video signal	0-3.3V swing square wave
41	GB6	8 bit video signal	0-3.3V swing square wave
42	GA6	8 bit video signal	0-3.3V swing square wave
43	GB7	8 bit video signal	0-3.3V swing square wave
44	GA7	8 bit video signal	0-3.3V swing square wave
45	GND		
46	GND		
47	NC		
48	NC		
49	GND		
50	GND		

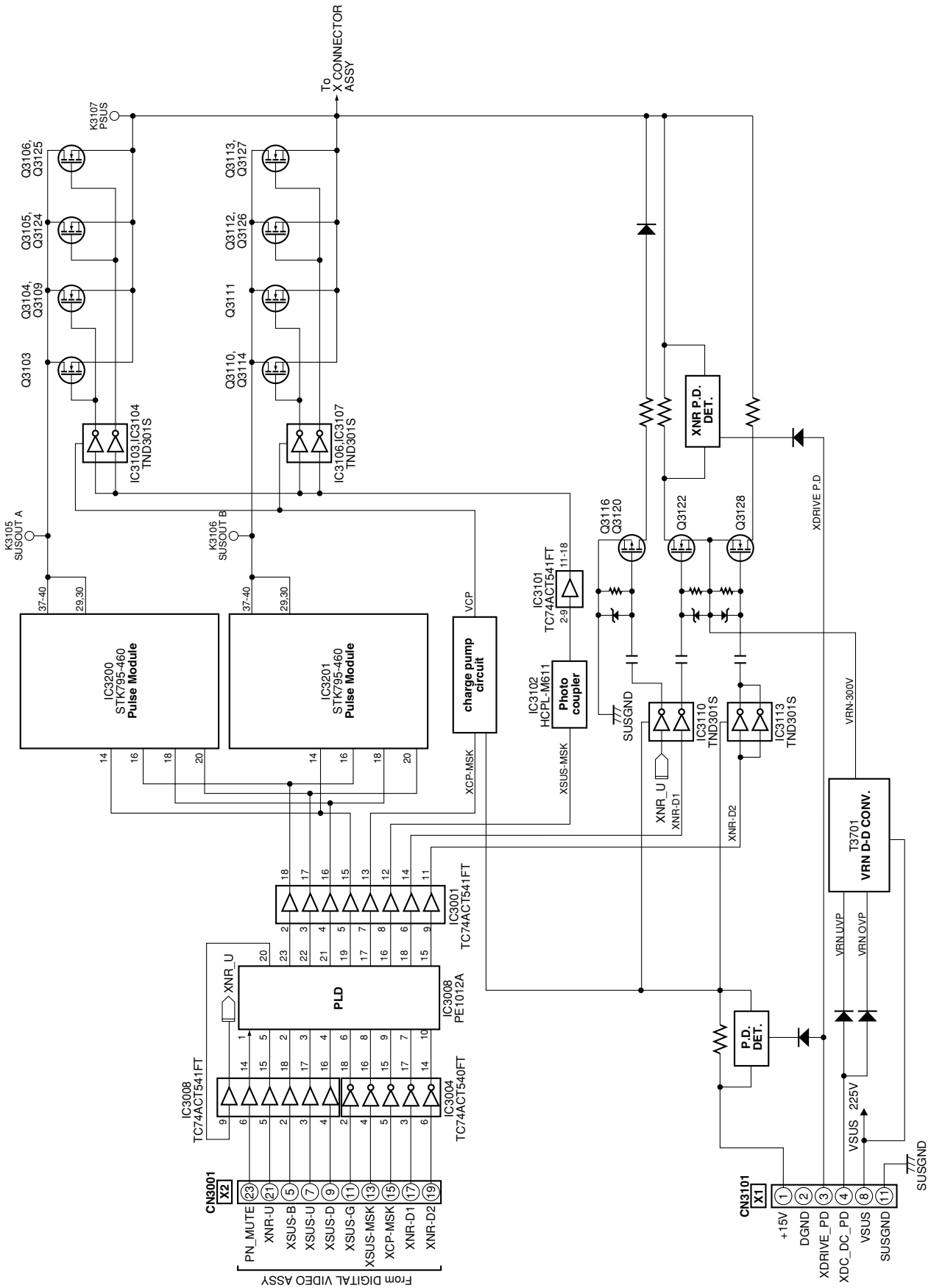
CN4005 (50P_FFC Connector) (↔ DIGITAL VIDEO Assy)

No.	Name	Description	Voltage at INPUT4 NTSC Input
1	NC		
2	NC		
3	NC		
4	NC		
5	RB0	8 bit video signal	0-3.3V swing square wave
6	RA0	8 bit video signal	0-3.3V swing square wave
7	RB1	8 bit video signal	0-3.3V swing square wave
8	RA1	8 bit video signal	0-3.3V swing square wave
9	RB2	8 bit video signal	0-3.3V swing square wave
10	RA2	8 bit video signal	0-3.3V swing square wave
11	RB3	8 bit video signal	0-3.3V swing square wave
12	RA3	8 bit video signal	0-3.3V swing square wave
13	RB4	8 bit video signal	0-3.3V swing square wave
14	RA4	8 bit video signal	0-3.3V swing square wave
15	RB5	8 bit video signal	0-3.3V swing square wave
16	RA5	8 bit video signal	0-3.3V swing square wave
17	RB6	8 bit video signal	0-3.3V swing square wave
18	RA6	8 bit video signal	0-3.3V swing square wave
19	RB7	8 bit video signal	0-3.3V swing square wave
20	RA7	8 bit video signal	0-3.3V swing square wave
21	GND		
22	CLK	Clock	0-3.3V swing square wave (40MHz)
23	GND		
24	DE	Data enable	0-3.3V swing square wave (+ polarity)
25	GND		
26	HD	Horizontal sync. signal	0-3.3V swing square wave
27	GND		(- polarity 48.4kHz)
28	VD	Vertical sync. signal	0-3.3V swing square wave
29	GND		(- polarity 60.0Hz)
30	A_SCL	I2C bus	0-5V swing square wave
31	F_KEY1	Front key signal 1	5.0V DC
32	PMST	MDR connecttion Detect signal	3.75V DC
33	SMPOW	MRrelay control	5.0V DC
34	A_MUTE	Audio mute	0.0V DC
35	CCKM	System activation detect	1.9V DC
36	M_STATE	Sil861 I2C bus master infomation	0.0V DC
37	SW_STC	Not used	
38	A_NG	Not used	
39	SW_TRG	System activation signal	5.0V DC
40	F_KEY2	Front key signal 2	5.0V DC
41	A_SDA	I2C bus	0-5V swing square wave
42	*LED_G	Green LED control signal	0.0V DC
43	TXD0	232C bus	0-5V swing square wave
44	*LED_R	Red LED control signal	5.0V DC
45	RXD0	232C bus	0-5V swing square wave
46	DDC_SCL	I2C for DDC	0-5V swing square wave
47	REM	Remote control signal	5.0V DC
48	DDC_SDA	I2C for DDC	0-5V swing square wave
49	GND		
50	GND		

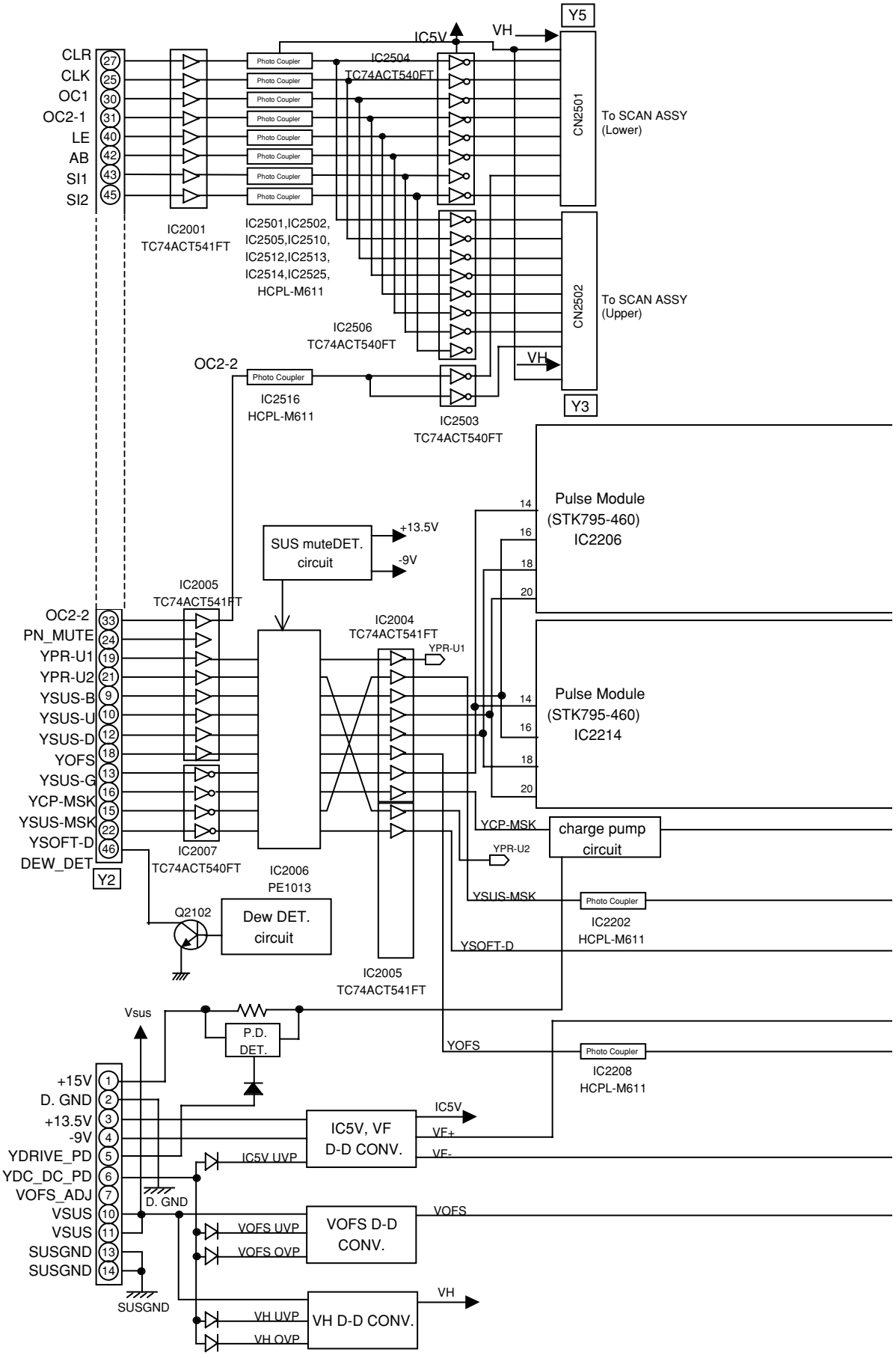
3.1.3 DIGITAL VIDEO ASSY

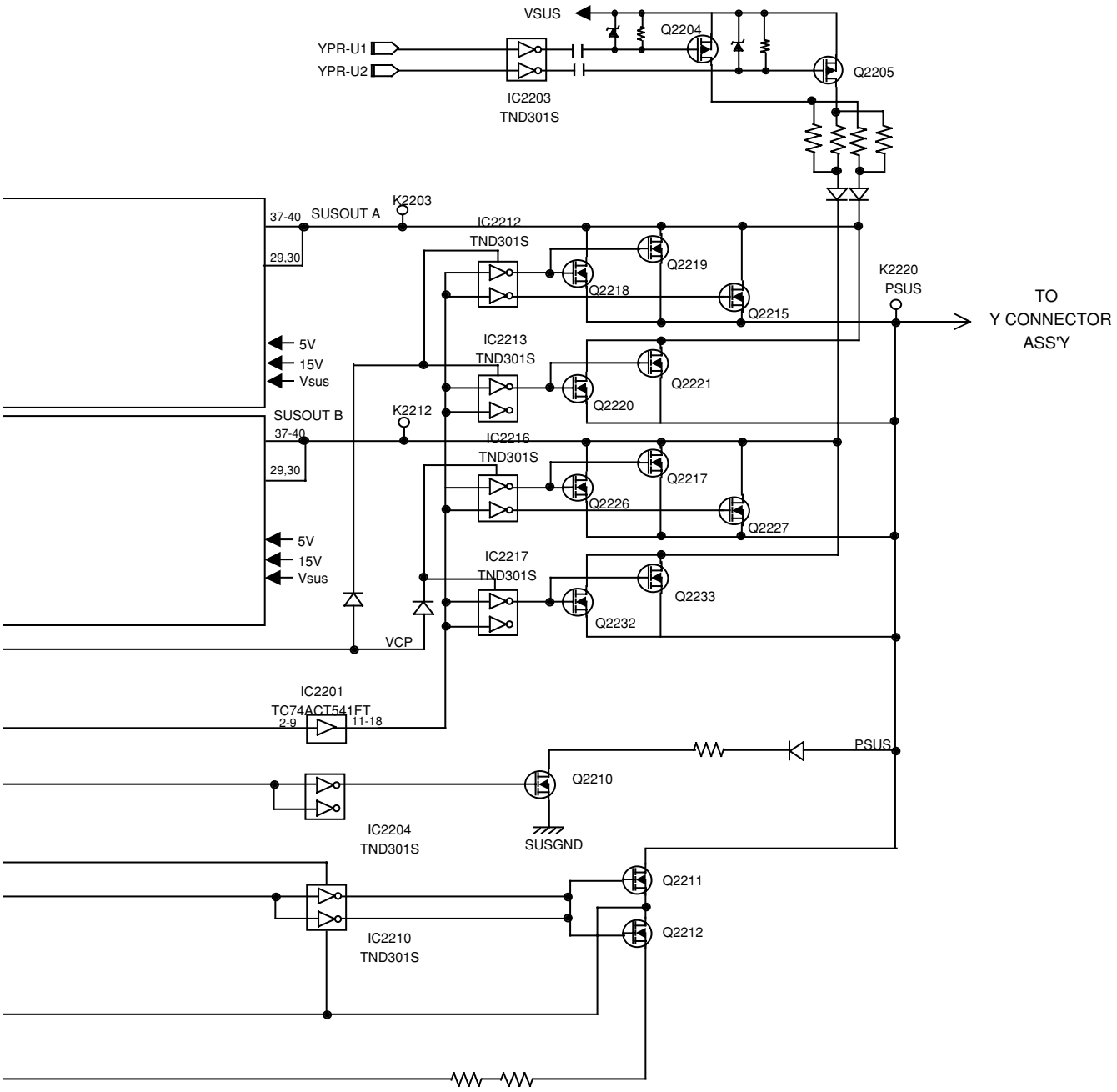


3.1.4 X DRIVE ASSY

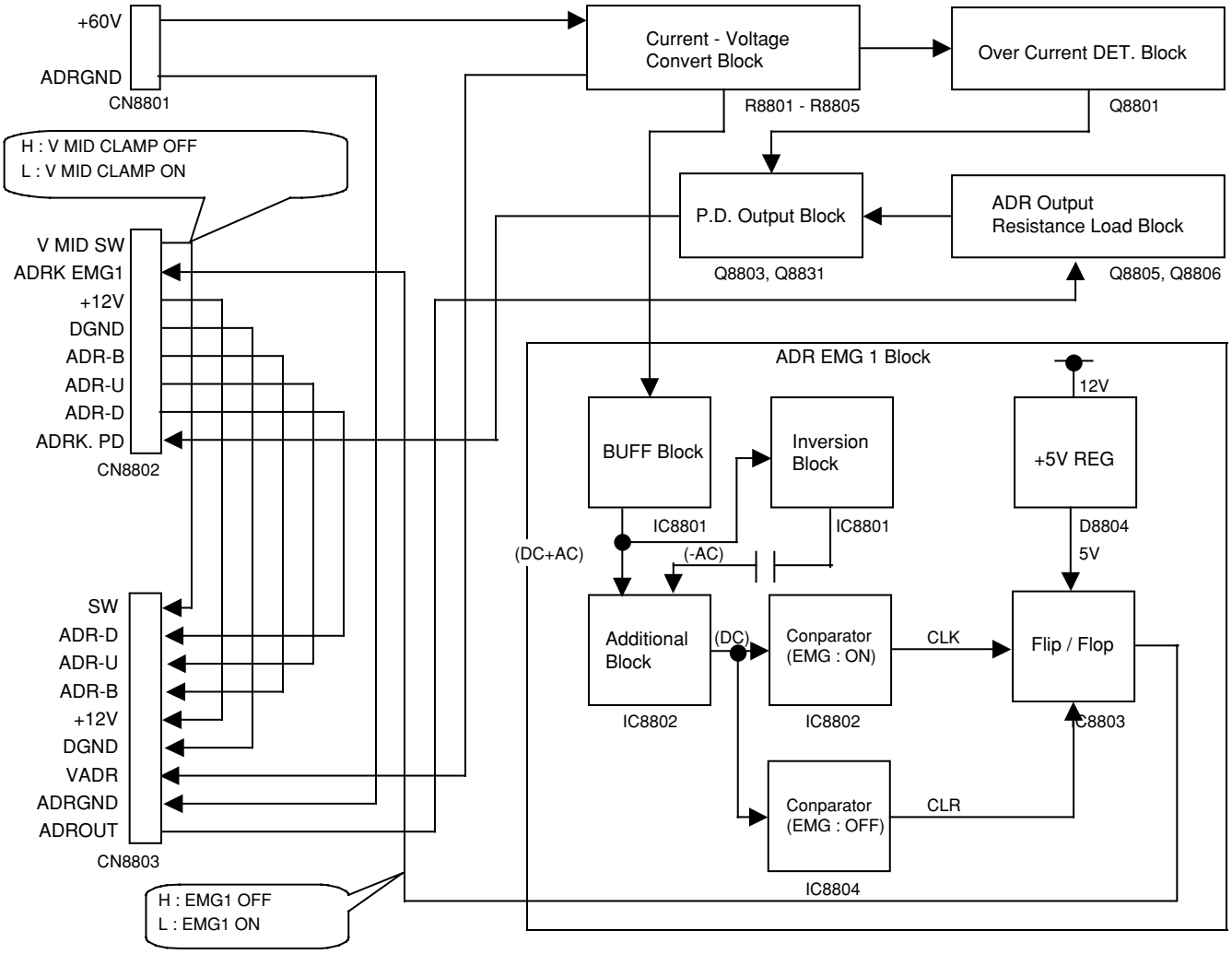


3.1.5 Y DRIVE ASSY

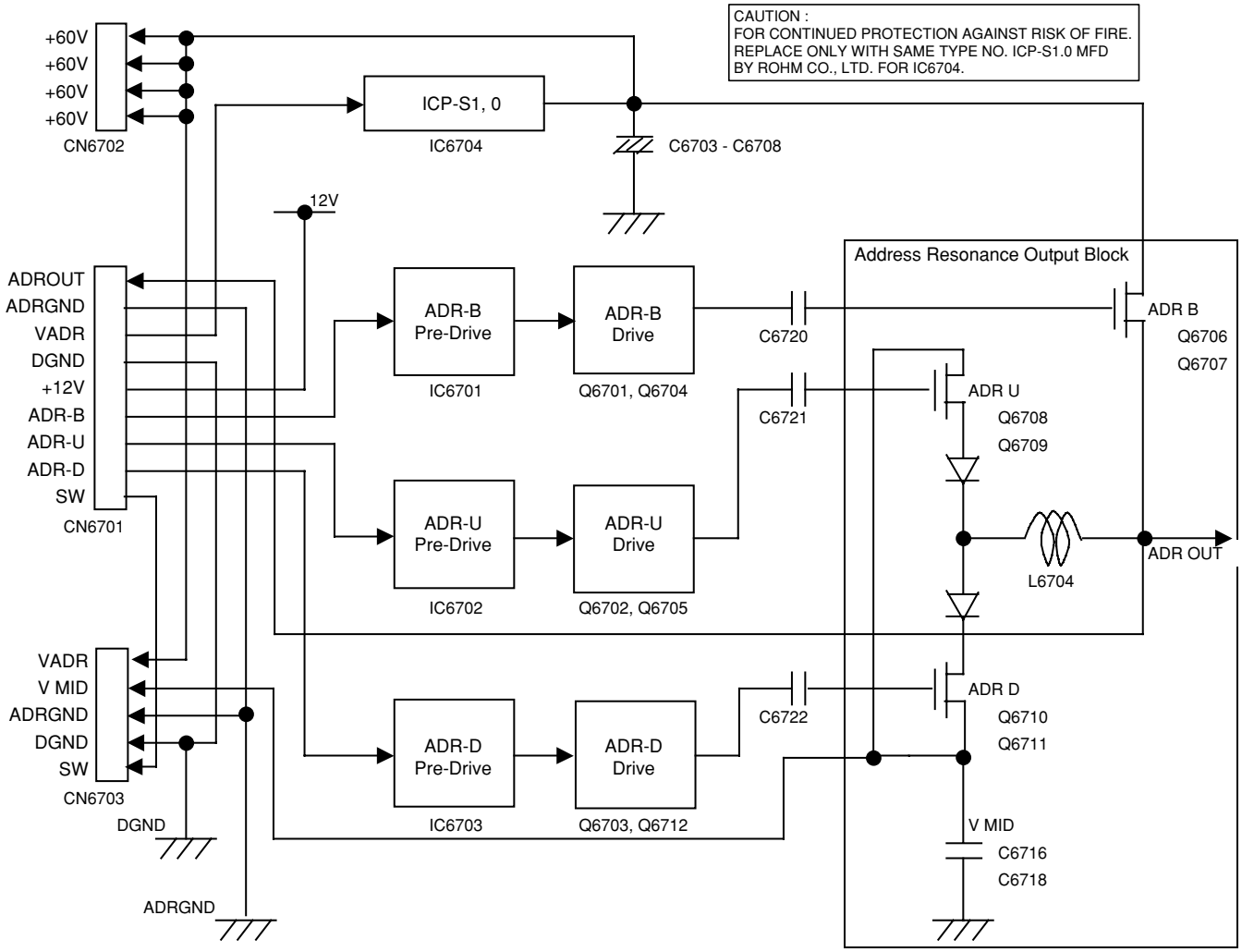



VSUS
Q2204
YPR-U1
YPR-U2
Q2205
IC2203
TND301S
K2203
37-40
SUSOUT A
IC2212
TND301S
29,30
Q2219
Q2218
Q2215
K2220
PSUS
TO
Y CONNECTOR
ASS'Y
5V
15V
Vsus
IC2213
TND301S
Q2221
Q2220
SUSOUT B
K2212
37-40
IC2216
TND301S
29,30
Q2217
Q2226
Q2227
5V
15V
Vsus
IC2217
TND301S
Q2233
Q2232
VCP
IC2201
TC74ACT541FT
2-9
11-18
PSUS
Q2210
IC2204
TND301S
SUSGND
Q2211
Q2212
IC2210
TND301S

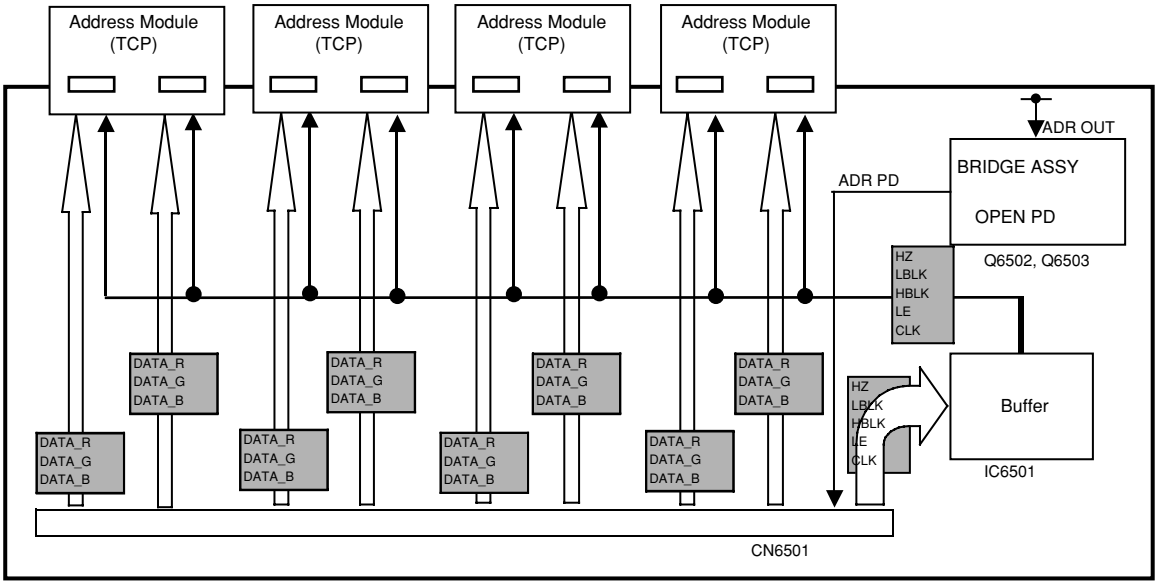
3.1.6 SUB ADDRESS A and B ASSYS



3.1.7 ADR RESONANCE ASSY



3.1.8 ADR CONNECT A, B, C and D ASSYS



3.1.9 AUDIO AMP and SP TERMINAL ASSYS

AUDIO AMP ASSY

IC5202 (CXA2021S)

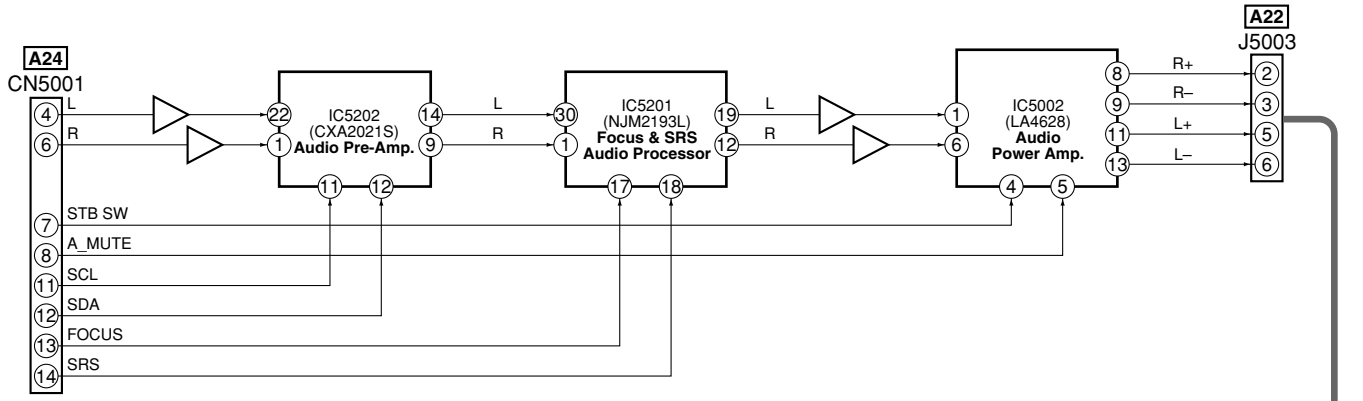
No.	Voltage (V)	No.	Voltage (V)
1	5.9	12	5.25
2	0	13	1.73
3	5.95	14	5.95
4	5.94	15	5.92
5	5.98	16	5.91
6	6.02	17	5.93
7	6.02	18	5.92
8	7.38	19	5.94
9	5.95	20	5.95
10	1.55	21	11.91
11	5.24	22	5.9

IC5201 (NJM2193L)

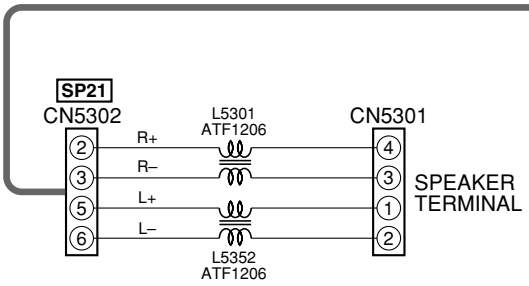
No.	Voltage (V)	No.	Voltage (V)
1	5.95	16	11.91
2	5.94	17	0
3	5.84	18	0
4	5.98	19	5.98
5	5.98	20	5.91
6	5.97	21	5.97
7	5.98	22	5.98
8	5.98	23	5.98
9	5.98	24	5.98
10	5.97	25	5.97
11	5.97	26	5.98
12	5.98	27	5.98
13	5.96	28	5.84
14	5.98	29	5.94
15	0	30	5.95

IC5002 (LA4628)

No.	Voltage (V)
1	1.6
2	7.5
3	0
4	3.37
5	2.29
6	1.6
7	1.97
8	7.3
9	7.3
10	0
11	7.3
12	0
13	7.3
14	15



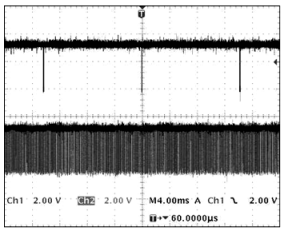
SP TERMINAL ASSY



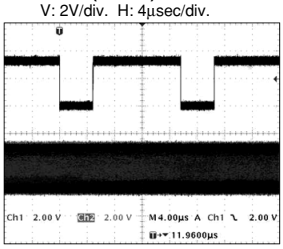
3.2 WAVEFORMS

DIGITAL VIDEO ASSY

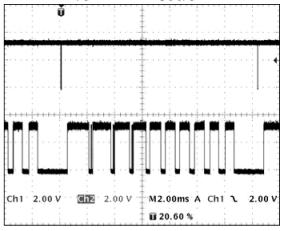
(1) K1327 (VDI)
K1328 (HDI)
V: 2V/div. H: 4msec/div.



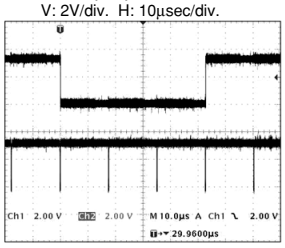
(4) K1326 (DEI)
K1333 (VCLKL)
V: 2V/div. H: 4µsec/div.



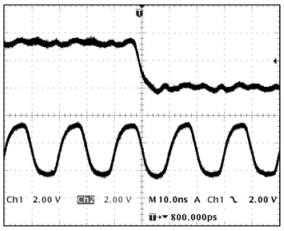
(8) K1308 (VDRB)
IC1501 - pin 15 (LBLK)
V: 2V/div. H: 2msec/div.



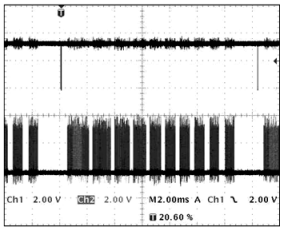
(1) K1327 (VDI)
K1328 (HDI)
V: 2V/div. H: 10µsec/div.



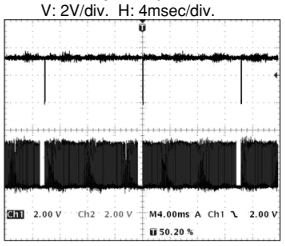
(4) K1326 (DEI)
K1333 (VCLKL)
V: 2V/div. H: 10nsec/div.



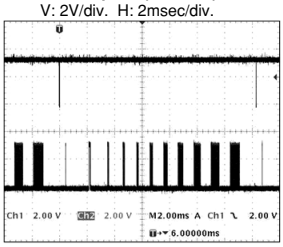
(9) K1308 (VDRB)
IC1501 - pin 13 (LE)
V: 2V/div. H: 2msec/div.



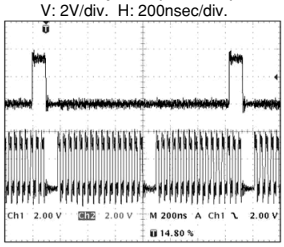
(2) K1327 (VDI)
CN1004 pin 49 (R DIGITAL VIDEO)
V: 2V/div. H: 4msec/div.



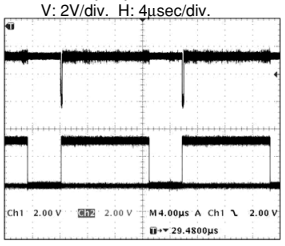
(5) K1308 (VDRB)
R1713 - pin 7 (XSUS_B)
V: 2V/div. H: 2msec/div.



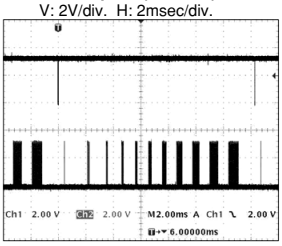
(10) IC1501 - pin 13 (LE)
IC1501 - pin 11 (ADRCLK)
V: 2V/div. H: 200nsec/div.



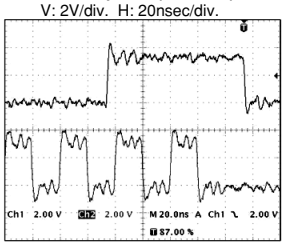
(3) K1328 (HDI)
K1326 (DEI)
V: 2V/div. H: 4µsec/div.



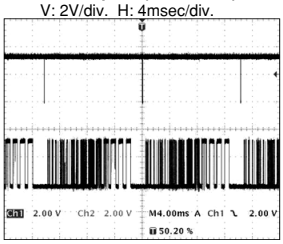
(6) K1308 (VDRB)
R1703 - pin 8 (YSUS_B)
V: 2V/div. H: 2msec/div.



(10) IC1501 - pin 13 (LE)
IC1501 - pin 11 (ADRCLK)
V: 2V/div. H: 20nsec/div.

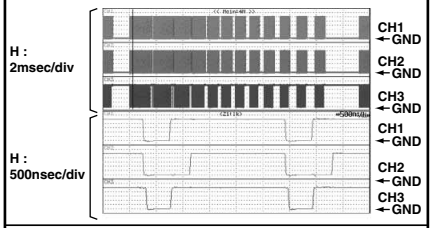


(7) K1308 (VDRB)
R1343 - pin 8 (RDAT_DL0)
V: 2V/div. H: 4msec/div.

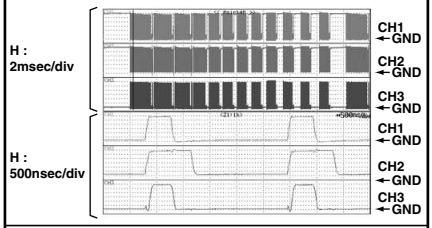


ADR RESONANCE ASSY

① **CH1 : IC6702 - pin 2**
CH2 : IC6701 - pin 2
CH3 : IC6703 - pin 2
V: 1V/div.
(Input : VIDEO, Signal : Color bar)



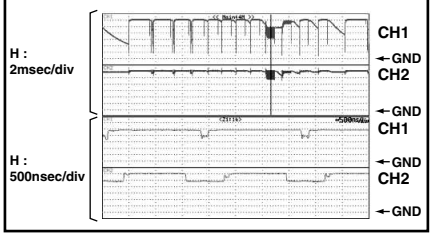
② **CH1 : D6706 Cathode**
CH2 : D6703 Cathode
CH3 : D6708 Cathode
V: 2V/div.
(Input : VIDEO, Signal : Color bar)



③ **CH1 : Q6706 Drain**
CH2 : Q6710 Soruse
V: 10V/div.
(Input : VIDEO, Signal : Color bar)

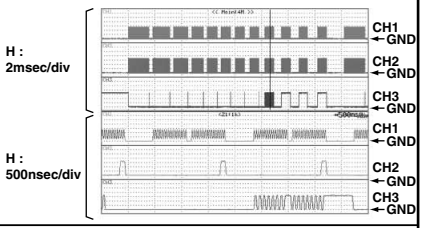
④ **CH1 : Q6706 Drain**
CH2 : Q6710 Soruse
V: 10V/div.
(Input : PC, Signal : Color bar)

⑤ **CH1 : Q6708 Drain**
CH2 : Q6710 Drain
V: 10V/div.
(Input : VIDEO, Signal : Color bar)

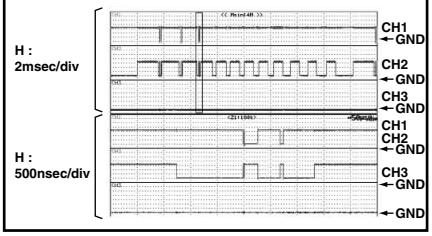


ADR CONNECT A - D ASSY

① **CH1 : IC6501 - pin 8 (CLK)**
CH2 : IC6501 - pin 6 (LE)
CH3 : IC6501 - (DATA)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)

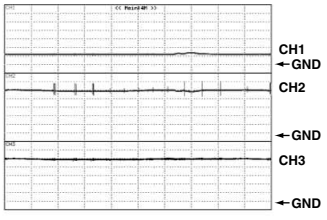


② **CH1 : IC6501 - pin 5 (HBLK)**
CH2 : IC6501 - pin 3 (LBLK)
CH3 : IC6501 - pin 2 (HZ)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)

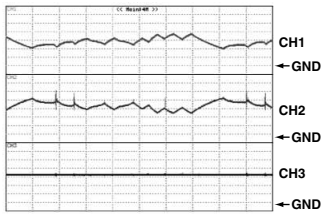


SUB ADDRESS A, B ASSY

① **CH1 : IC8801 - pin 3**
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)



② **CH1 : IC8801 - pin 3**
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)



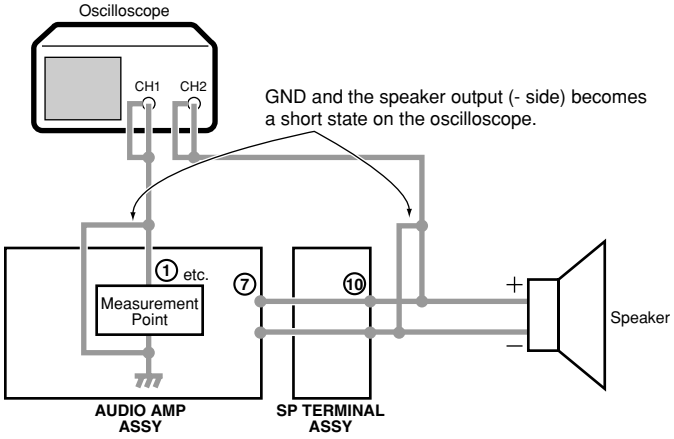
AUDIO SECTION

● Measurement condition

Video Input Signal	: FULL FIELD COLOR-BAR
Audio Input Signal	: 1kHz Sine Carve 0.2Vrms
Volume	: 60 (MAX)
AV Selection	: STANDARD
SRS	: OFF
FOCUS	: OFF

● Caution in the measurement

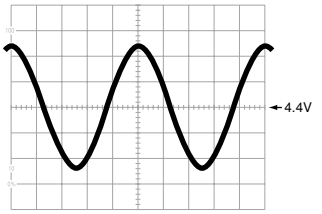
Audio Power Amp. (IC5002: LA4628) on the AUDIO AMP Assy is BTL system, and, as for the power amplifier and the speaker output, ± poles becomes hot for the ground. Therefore be careful not to connect the measuring instrument as the following figures. (Power amplifier may be damaged.)



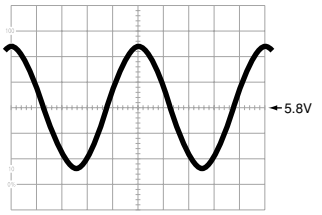
Wrong connection example

AUDIO AMP ASSY

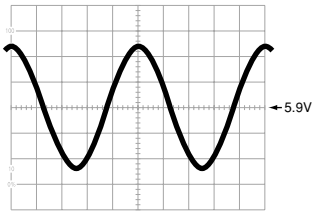
① CN5001 - pin 4 (L) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



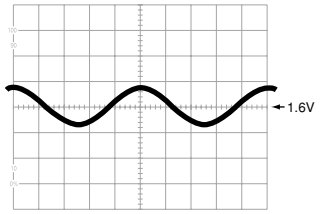
② IC5202 - pin 14 (LOUT) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



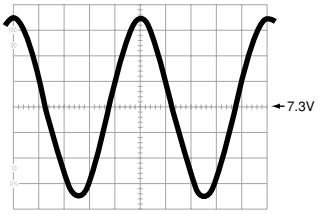
③ IC5201 - pin 19 (FOCUSOUTL) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



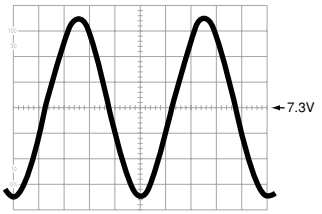
④ IC5002 - pin 1 (IN1) ↔ GND
V: 0.1V/div. H: 0.2msec/div.



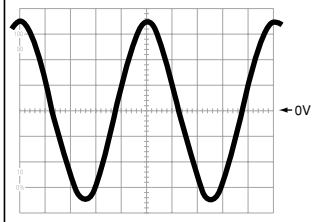
⑤ J5003 - pin 5 (L+) ↔ GND
V: 1V/div. H: 0.2msec/div.



⑥ J5003 - pin 6 (L–) ↔ GND
V: 1V/div. H: 0.2msec/div.

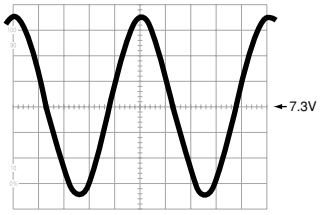


⑦ J5003 - pin 5 (L+) ↔ pin 6 (L–)
V: 2V/div. H: 0.2msec/div.

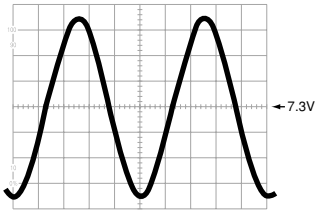


SP TERMINAL ASSY

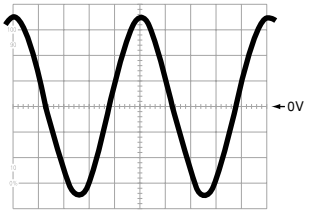
⑧ CN5301 - pin 1 (L+) ↔ GND
V: 1V/div. H: 0.2msec/div.



⑨ CN5301 - pin 2 (L–) ↔ GND
V: 1V/div. H: 0.2msec/div.



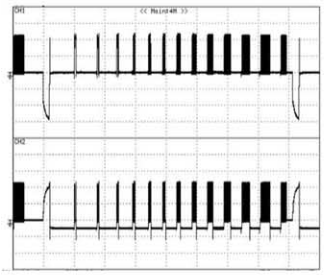
⑩ CN5301 - pin 1 (L+) ↔ pin 2 (L–)
V: 2V/div. H: 0.2msec/div.



Sustain Waveforms

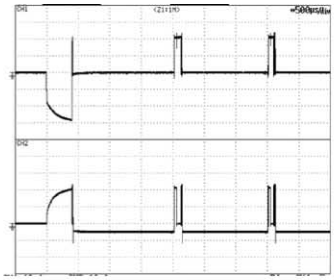
● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.



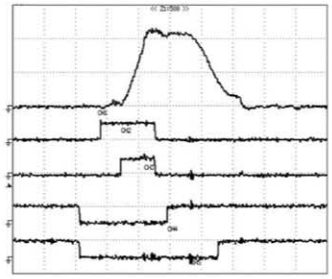
● Sustain Waveform (1 sub-field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 500µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 500µsec/div.



● Sustain Waveform

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 500nsec/div.
ch 2 : K2028 (YSUS_U) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 3 : K2027 (YSUS_B) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 4 : K2029 (YSUS_D) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 5 : K2037 (YSUS_G) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.

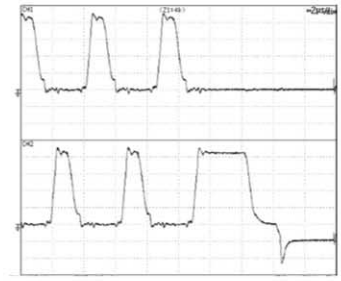


● Sustain Waveform (sustain)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 5µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 5µsec/div.

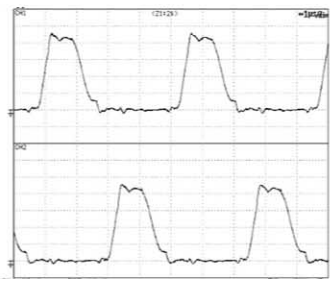
● Sustain Waveform (sustain)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 2µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 2µsec/div.



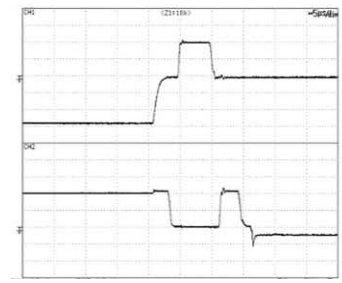
● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 1µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 1µsec/div.



● Sustain Waveform (reset pulse)

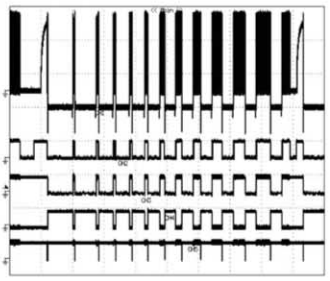
ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 5µsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 5µsec/div.



Drive Pulse Waveforms

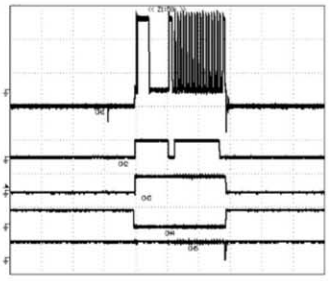
● Y Drive Pulse Control Waveform (1 field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 2msec/div.



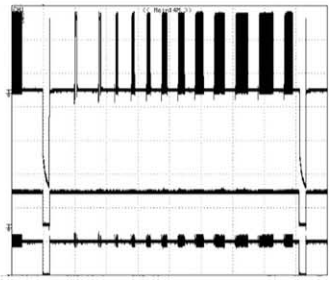
● Y Drive Pulse Control Waveform (1 sub-field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 50µsec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 50µsec/div.



● X Drive Pulse Control Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K3017 (XCP_MSK) - K3005 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K3015 (XSUS_MSK) - K3005 (DGND)
V: 5V/div. H: 2msec/div.



5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP		SCAN FUKUGO ASSY	AWV1927
NSP		├─SCAN (A) ASSY	AWZ6666
NSP		├─SCAN (B) ASSY	AWZ6667
NSP		├─X CONNECTOR (A) ASSY	AWZ6672
NSP		├─X CONNECTOR (B) ASSY	AWZ6673
NSP		├─BRIDGE A ASSY	AWZ6674
NSP		├─BRIDGE B ASSY	AWZ6675
NSP		├─BRIDGE C ASSY	AWZ6676
NSP		└─BRIDGE D ASSY	AWZ6677
		ADDRESS FUKUGO ASSY	AWV1928
NSP		├─CLAMP A ASSY	AWZ6668
NSP		├─CLAMP B ASSY	AWZ6669
NSP		├─ADR CONNECT A ASSY	AWZ6678
NSP		├─ADR CONNECT B ASSY	AWZ6679
NSP		├─ADR CONNECT C ASSY	AWZ6680
NSP		├─ADR CONNECT D ASSY	AWZ6681
		└─ADR RESONANCE ASSY	AWZ6682
		X DRIVE ASSY	AWV1930
		HD Y DRIVE ASSY	AWV1931
		├─Y DRIVE ASSY	AWZ6683
		├─SUB ADDRESS A ASSY	AWZ6692
		└─SUB ADDRESS B ASSY	AWZ6693
		DIGITAL VIDEO ASSY	AWV1929
NSP		HD FUKUGO ASSY	AWV1923
		├─MR INTERFACE ASSY	AWZ6654
		├─LED ASSY	AWZ6655
		├─FRONT KEY ASSY	AWZ6656
		├─FRONT KEY CONN ASSY	AWZ6657
		├─IR (P) ASSY	AWZ6658
		└─THERMAL SENSOR ASSY	AWZ6660
NSP		HD AUDIO ASSY	AWV1935
		├─AUDIO AMP ASSY	AWZ6687
		└─SP TERMINAL ASSY	AWZ6688

SCAN (A) ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC6001-IC6006	SN755860PJ

CAPACITORS

Mark	No.	Description	Part No.
		C6001,C6002,C6011,C6012 (0.1µF/250V)	ACG1088
		C6021,C6022,C6031,C6032 (0.1µF/250V)	ACG1088
		C6041,C6042,C6051,C6052 (0.1µF/250V)	ACG1088
		C6004,C6005,C6009,C6013,C6015	CCSRCH151J50
		C6020,C6026,C6027,C6029,C6033	CCSRCH151J50
		C6038,C6040,C6044,C6048,C6049	CCSRCH151J50
		C6054,C6058-C6060,C6062-C6066	CCSRCH151J50
		C6007,C6008,C6014,C6019,C6025	CCSRCH181J50
		C6028,C6035,C6039,C6046,C6047	CCSRCH181J50
		C6056,C6057	CCSRCH181J50
		C6003,C6006,C6017,C6018	CCSRCH390J50
		C6023,C6024,C6034,C6037,C6043	CCSRCH390J50
		C6045,C6053,C6055	CCSRCH390J50
		C6010,C6016,C6030,C6036,C6050	CKSRYF104Z16
		C6061	CKSRYF104Z16

RESISTORS

Mark	No.	Description	Part No.
		R6007,R6012,R6021,R6028,R6032	RAB4C221J
		R6040	RAB4C221J
		Other Resistors	RS1/16S□□□J

OTHERS

Mark	No.	Description	Part No.
		CN6001 15P CONNECTOR	AKP1218
		K6001,K6012,K6018,K6025,K6031 TEST PIN	AKX9002
		K6038,K6044 TEST PIN	AKX9002

SCAN (B) ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC6201-IC6206	SN755860PJ

Mark	No.	Description	Part No.
CAPACITORS			
	C6201,C6202,C6212,C6213 (0.1µF/250V)		ACG1088
	C6222,C6223,C6232,C6233 (0.1µF/250V)		ACG1088
	C6242,C6243,C6252,C6253 (0.1µF/250V)		ACG1088
	C6203,C6205,C6206,C6210,C6215		CCSRCH151J50
	C6219,C6220,C6227,C6229,C6231		CCSRCH151J50
	C6235,C6236,C6240,C6244,C6246		CCSRCH151J50
	C6251,C6255,C6259,C6260		CCSRCH151J50
	C6262-C6266		CCSRCH151J50
	C6208,C6209,C6217,C6218,C6226		CCSRCH181J50
	C6230,C6238,C6239,C6245,C6250		CCSRCH181J50
	C6257,C6258		CCSRCH181J50
	C6204,C6207,C6214,C6216		CCSRCH390J50
	C6224,C6225,C6234,C6237		CCSRCH390J50
	C6248,C6249,C6254,C6256		CCSRCH390J50
	C6211,C6221,C6228,C6241,C6247		CKSRYF104Z16
	C6261		CKSRYF104Z16
RESISTORS			
	R6207,R6209,R6222,R6228,R6232		RAB4C221J
	R6239		RAB4C221J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN6201	15P CONNECTOR	AKP1218
	K6202,K6212,K6219,K6225,K6231	TEST PIN	AKX9002
	K6239,K6244	TEST PIN	AKX9002

X CONNECTOR (A) ASSY

RESISTORS			
	All Resistors		RS1/16S□□□J

X CONNECTOR (B) ASSY

RESISTORS			
	All Resistors		RS1/16S□□□J

BRIDGE A ASSY

SEMICONDUCTORS			
	D6421,D6422		D1FL20U(S)
CAPACITORS			
	C6421,C6422 (0.1µF/100V)		ACG1098
OTHERS			
	CN6421	PH CONNECTOR	B4B-PH-SM3

BRIDGE B ASSY

SEMICONDUCTORS			
	D6431,D6432		D1FL20U(S)
CAPACITORS			
	C6431,C6432 (0.1µF/100V)		ACG1098
OTHERS			
	CN6431	PH CONNECTOR	B4B-PH-SM3

BRIDGE C ASSY

SEMICONDUCTORS			
	D6441,D6442		D1FL20U(S)
CAPACITORS			
	C6441,C6442 (0.1µF/100V)		ACG1098
OTHERS			
	CN6441	PH CONNECTOR	B4B-PH-SM3

BRIDGE D ASSY

SEMICONDUCTORS			
	D6451,D6452		D1FL20U(S)
CAPACITORS			
	C6451,C6452 (0.1µF/100V)		ACG1098
OTHERS			
	CN6451	PH CONNECTOR	B4B-PH-SM3

CLAMP A ASSY

SEMICONDUCTORS			
	D6461,D6462		D1FL20U(S)
CAPACITORS			
	C6461,C6462 (0.1µF/100V)		ACG1098
OTHERS			
	CN6461	PH CONNECTOR	B4B-PH-SM3

CLAMP B ASSY

SEMICONDUCTORS			
	D6471,D6472		D1FL20U(S)
CAPACITORS			
	C6471,C6472 (0.1µF/100V)		ACG1098
OTHERS			
	CN6471	PH CONNECTOR	B4B-PH-SM3

Mark	No.	Description	Part No.

ADR CONNECT A ASSY

SEMICONDUCTORS

	IC6501	TC74VHC541FT
	Q6502	2SC2712
	Q6503	2SK209
	D6501	DA227

COILS

	L6501,L6502 (22µH/0.11A)	ATH1081

CAPACITORS

	C6504,C6513-C6520,C6528 (330pF/100V)	ACG1094
	C6531,C6533,C6534 (47µF/6.3V)	ACH1341
	C6536-C6538	CCSRCH121J50
	C6507-C6510,C6522-C6525,C6532	CKSRYF104Z16
	C6535	CKSRYF104Z16

RESISTORS

	R6519-R6522,R6526,R6528	RAB4C100J
	R6530,R6531,R6534-R6537,R6541	RAB4C100J
	R6543,R6545,R6547	RAB4C100J
	R6516	RAB4C473J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN6501	55P CONNECTOR	AKM1202

ADR CONNECT B ASSY

SEMICONDUCTORS

	IC6601	TC74VHC541FT
	Q6602	2SC2712
	Q6603	2SK209
	D6601	DA227

COILS

	L6601,L6602 (22µH/0.11A)	ATH1081

CAPACITORS

	C6604,C6613-C6620,C6628 (330pF/100V)	ACG1094
	C6631,C6633,C6634 (47µF/6.3V)	ACH1341
	C6636-C6638	CCSRCH121J50
	C6607-C6610,C6622-C6625,C6632	CKSRYF104Z16
	C6635	CKSRYF104Z16

RESISTORS

	R6619-R6622,R6626,R6628	RAB4C100J
	R6630,R6631,R6634-R6637,R6641	RAB4C100J
	R6643,R6645,R6647	RAB4C100J
	R6616	RAB4C473J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN6601	55P CONNECTOR	AKM1202

ADR CONNECT C ASSY

SEMICONDUCTORS

	IC6801	TC74VHC541FT
	Q6802	2SC2712
	Q6803	2SK209
	D6801	DA227

COILS

	L6801,L6802 (22µH/0.11A)	ATH1081

CAPACITORS

	C6804,C6813-C6820,C6828 (330pF/100V)	ACG1094
	C6831,C6833,C6834 (47µF/6.3V)	ACH1341
	C6836-C6838	CCSRCH121J50
	C6807-C6810,C6822-C6825,C6832	CKSRYF104Z16
	C6835	CKSRYF104Z16

RESISTORS

	R6819-R6822,R6826,R6828	RAB4C100J
	R6830,R6831,R6834-R6837,R6841	RAB4C100J
	R6843,R6845,R6847	RAB4C100J
	R6816	RAB4C473J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN6801	55P CONNECTOR	AKM1202

ADR CONNECT D ASSY

SEMICONDUCTORS

	IC6901	TC74VHC541FT
	Q6902	2SC2712
	Q6903	2SK209
	D6901	DA227

COILS

	L6901,L6902 (22µH/0.11A)	ATH1081

CAPACITORS

	C6904,C6913-C6920,C6928 (330pF/100V)	ACG1094
	C6931,C6933,C6934 (47µF/6.3V)	ACH1341
	C6936-C6938	CCSRCH121J50
	C6907-C6910,C6922-C6925,C6932	CKSRYF104Z16
	C6935	CKSRYF104Z16

RESISTORS

	R6919-R6922,R6926,R6928	RAB4C100J
	R6930,R6931,R6934-R6937,R6941	RAB4C100J
	R6943,R6945,R6947	RAB4C100J
	R6916	RAB4C473J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN6901	55P CONNECTOR	AKM1202

Mark	No.	Description	Part No.

ADR RESONANCE ASSY

SEMICONDUCTORS

⚠	IC6704 (1A/50V)		ICP-S1.0
	IC6701-IC6703		TND301S
	Q6704,Q6705,Q6712		2SB1132
	Q6701-Q6703		2SD1664
	Q6710,Q6711		FS30ASJ-2
	Q6706-Q6709		FX20ASJ-2
	D6701,D6703,D6704,D6706		1SS355
	D6709,D6710,D6717,D6718		D1FL20U(S)
	D6711-D6714		SPX-62S
	D6702,D6705,D6716		UDZ15B

COILS

	L6704	CHOKE COIL	ATH1121

CAPACITORS

	C6716,C6718 (1.00F)		ACE1159
	C6720,C6721 (0.01μF/100V)		ACG1101
	C6722 (0.0068F/100V)		ACG1102
	C6703-C6708 (56μF/80V)		ACH1347
	C6701,C6702,C6709		CEHV470M16
	C6710,C6711,C6713		CKSRYF104Z16

RESISTORS

	All Resistors		RS1/16S□□□J

OTHERS

	CN6701	23P CONNECTOR	AKP1221
	CN6702	PH CONNECTOR	B4B-PH-SM3
	CN6703	PH CONNECTOR	B5B-PH-SM3

X DRIVE ASSY

[X LOGIC BLOCK]

SEMICONDUCTORS

	IC3003		PE1012A
	IC3004		TC74ACT540FT
	IC3001,IC3008		TC74ACT541FT

COIL

	L3001		LFEA100J

CAPACITORS

	C3005		CEHAT470M16
	C3001,C3003,C3004,C3006		CKSRYF104Z50

RESISTORS

	R3009-R3012		RAB4C0R0J
	R3001,R3003,R3026,R3029		RAB4C470J
	R3002,R3005,R3030,R3033		RAB4C472J
	Other Resistors		RS1/16S□□□J

OTHERS

	K3001,K3003,K3004,K3008,K3010	TEST PIN	AKX9002
	K3012-K3015,K3017,K3018	TEST PIN	AKX9002
	CN3001	30P CONNECTOR	KF050HA30L

Mark	No.	Description	Part No.

[X SUS BLOCK]

SEMICONDUCTORS

	IC3102		HCPL-M611
	IC3200,IC3201		STK795-460
	IC3101		TC74ACT541FT
	IC3103,IC3104,IC3106,IC3107		TND301S
	IC3110,IC3113		TND301S
	IC3109		UPC78L05T
	Q3117		2SJ181L
	Q3116,Q3119,Q3120		2SJ522
	Q3101		2SK2503
	Q3103-Q3106,Q3109-Q3114		FS16VS-9
	Q3124-Q3127		FS16VS-9
	Q3123		FS2AS-14A
	Q3122,Q3128		FS7VS-14A
	Q3102,Q3118		HN1B04FU
	D3119		1SS184
	D3108,D3124,D3125,D3130,D3133		1SS355
	D3101,D3102,D3117,D3126,D3131		D1FL40
	D3200,D3202,D3203,D3205		D1FL40
	D3207,D3208,D3210-D3215		D1FL40
	D3120,D3127-D3129,D3135,D3136		UDZ15B

COILS

	L3206,L3207	RADIAL LEAD INDUCTOR	ATH1112
	L3201,L3204	CHOKE COIL	ATH1113
	L3202,L3205,L3210,L3211	CHOKE COIL	ATH1118
	L3101		LFEA100J
	L3107,L3108		LFEA101J
	L3103		LFEA470J

CAPACITORS

	C3205,C3206,C3212,C3213 (1.5μF)		ACE1160
	C3225,C3226 (1.5μF)		ACE1160
	C3131,C3139,C3143 (0.1μF/630V)		ACG1092
	C3223,C3224 (100pF/500V)		ACG1100
	C3132 (47μF/350V)		ACH1346
	C3200-C3202,C3207-C3209	(330μF/315V)	ACH1348
	C3214-C3221		CCSRCH331J50
	C3112,C3133,C3203,C3210		CEHAT101M16
	C3102,C3107,C3115,C3204,C3211		CEHAT101M25
	C3101		CEHAT221M25
	C3104,C3106,C3134,C3141		CEHAT470M16
	C3135		CEHAT470M25
	C3154,C3163		CKSRYB332K50
	C3103,C3105,C3108,C3109,C3111		CKSRYF104Z50
	C3113,C3114,C3117,C3130,C3140		CKSRYF104Z50
	C3147		CKSRYF104Z50

RESISTORS

	R3183,R3184,R3187		ACN1156
	R3113,R3114,R3121,R3122,R3126		RAB4C100J
	R3132,R3140,R3141		RAB4C100J
	R3212,R3217,R3230,R3234,R3237		RS1/10S184J
	R3240,R3242,R3245		RS1/10S184J
	R3250-R3253		RS1/16S3300F
	R3134,R3163		RS1/2S100J
	R3103		RS1/2S102J
	R3109		RS1/2S2R2J
	R3102		RS1/2S561J

Mark	No.	Description	Part No.
	R3215,R3216		RS1MMF101J
	R3228,R3229		RS1MMF122J
	R3202,R3203		RS1MMF563J
	R3178,R3179		RS2MMF181J
	VR3200-VR3203 (1kΩ)		ACP1089
	Other Resistors		RS1/16S□□□J

OTHERS

	3101	SPACER	AEH1049
	K3102-K3104	TEST PIN	AKX9002
	KN3105-KN3114	GROUND PLATE	ANK-142
	CN3101	13P PLUG	KM250MA13
	CN3102	3P PLUG	KM250MA3

[X DD CON BLOCK]

SEMICONDUCTORS

	IC3712	AN1431M
	IC3701	MIP161
	IC3702-IC3704	TLP181(GR)
	Q3701	2SC2712
	Q3800	HN1A01FU
	D3710,D3711	1SS355
	D3705,D3706	D1FL20U(S)
	D3702	EC8FS6
	D3708,D3709,D3713	RD110P
	D3703	UDZ18B
	D3707	UDZS5.6B

COIL

	L3701	RADIAL LEAD INDUCTOR	ATH1110

TRANSFORMER

	T3701	ATK1153

CAPACITORS

	C3701 (22μF/315V)	ACH1345
	C3717 (47μF/350V)	ACH1346
	C3704	CEHAT101M16
	C3706,C3711,C3714	CEHAT101M25
	C3712	CEHAT331M16
	C3705	CKSQYF104Z50
	C3703,C3707,C3708,C3710	CKSRYB104K16
	C3715,C3716	CKSRYB104K16

RESISTORS

	R3732	RS1/16S1001F
	R3806	RS1/16S1802F
	R3701-R3704,R3706-R3717	RS1/16S1803F
	R3805	RS1/16S2702F
	R3731	RS1/16S3900F
	R3802	RS1/16S5601F
	R3738,R3739	RS1/2S102J
	R3800,R3801	RS1/2S823J
	VR3701 (1kΩ)	ACP1089
	Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.

Y DRIVE ASSY

[Y DRIVE LOGIC BLOCK]

SEMICONDUCTORS

	IC2006	PE1013B
	IC2007	TC74ACT540FT
	IC2001,IC2003-IC2005	TC74ACT541FT
	Q2121	2SK2201
	Q2101,Q2102	HN1C01FU
	D2101	1SS355

COIL

	L2001	LFEA100J

CAPACITORS

	C2101	CEHAT100M50
	C2103	CEHAT1R0M50
	C2003	CEHAT470M16
	C2001,C2004,C2005,C2007,C2008	CKSRYF104Z50
	C2010,C2102,C2104,C2121	CKSRYF104Z50

RESISTORS

	R2015-R2018	RAB4C0R0J
	R2001,R2002,R2005,R2011	RAB4C470J
	R2037,R2038	RAB4C470J
	R2035,R2036,R2039,R2040	RAB4C472J
	Other Resistors	RS1/16S□□□J

OTHERS

	CN2001	50P CONNECTOR	AKM1201
	K2001-K2005,K2009,K2010,K2013	TEST PIN	AKX9002
	K2021,K2027-K2029,K2037	TEST PIN	AKX9002
	K2039-K2041,K2053	TEST PIN	AKX9002
	2101	SENSOR	AXX1057
		SCREW	BMZ20P040FMC
		NUT	NB20FMC

[Y DRIVE SUS BLOCK]

SEMICONDUCTORS

	IC2202,IC2208	HCPL-M611
	IC2206,IC2214	STK795-460
	IC2201	TC74ACT541FT
	IC2203,IC2204,IC2210,IC2212	TND301S
	IC2213,IC2216,IC2217	TND301S
	IC2205,IC2209	UPC78L05T
	Q2203-Q2205	2SJ522
	Q2201	2SK2503
	Q2215,Q2217-Q2221,Q2226,Q2227	FQB34N20
	Q2232,Q2233	FQB34N20
	Q2210-Q2212	FS16VS-9
	Q2209	HN1B04FU
	D2225	1SS184
	D2202,D2204	1SS226
	D2211	1SS355
	D2201,D2203,D2205,D2208,D2210	D1FL40
	D2212,D2214-D2216,D2221-D2223	D1FL40
	D2226-D2228,D2239,D2243	D1FL40
	D2209	DF20L60
	D2206,D2207	UDZ15B

Mark	No.	Description	Part No.
COILS			
	L2207	RADIAL LEAD INDUCTOR	ATH1110
	L2213,L2214	RADIAL LEAD INDUCTOR	ATH1112
	L2206,L2211	CHOKE COIL	ATH1113
	L2208,L2212,L2215,L2216	CHOKE COIL	ATH1118
	L2210		LFEA100J
	L2203,L2205		LFEA101J
	L2201,L2204		LFEA470J
CAPACITORS			
	C2228,C2230,C2231,C2250-C2252	(1.5µF)	ACE1160
	C2209,C2210 (0.1µF/630V)		ACG1092
	C2233,C2248 (100pF/500V)		ACG1100
	C2211 (47µF/350V)		ACH1346
	C2216,C2217,C2219,C2234-C2236	(330µF/315V)	ACH1348
	C2253-C2260		CCSRCH331J50
	C2221,C2225,C2226,C2246		CEHAT101M16
	C2204,C2227,C2237,C2240,C2247		CEHAT101M25
	C2202		CEHAT221M25
	C2232		CEHAT331M2A
	C2218,C2224,C2229		CEHAT470M16
	C2212,C2214		CEHAT470M25
	C2264,C2270		CKSRYB472K50
	C2201,C2203,C2205,C2208,C2213		CKSRYF104Z50
	C2220,C2222,C2223,C2238,C2239		CKSRYF104Z50
	C2241,C2242		CKSRYF104Z50
RESISTORS			
	R2235,R2273,R2291,R2305,R2315		RAB4C100J
	R2317,R2342		RAB4C100J
	R2253,R2256,R2270,R2283,R2332		RS1/10S184J
	R2338,R2354,R2355		RS1/10S184J
	R2358-R2361		RS1/16S3300F
	R2263,R2264		RS1/2S100J
	R2203		RS1/2S102J
	R2209		RS1/2S2R2J
	R2202		RS1/2S561J
	R2278,R2303		RS1MMF101J
	R2233,R2234		RS1MMF152J
	R2274,R2275		RS1MMF471J
	R2298,R2299		RS2MMF3R3J
	R2277		RS3LMFR47J
	R2276		RS3LMFR56J
	VR2201-VR2204 (1kΩ)		ACP1089
	Other Resistors		RS1/16S□□□J
OTHERS			
	2201	SPACER	AEH1049
	K2211,K2214-K2217	TEST PIN	AKX9002
	KN2201-KN2210	GROUND PLATE	ANK-142
	CN2201	15P PLUG	KM250MA15
	CN2202	3P PLUG	KM250MA3

Mark	No.	Description	Part No.
[Y DRIVE SCAN BLOCK]			
SEMICONDUCTORS			
	IC2501,IC2502,IC2505,IC2510		HCPL-M611
	IC2512-IC2514,IC2516,IC2525		HCPL-M611
	IC2503,IC2504,IC2506		TC74ACT540FT
COILS			
	L2501-L2503		LFEA100J
CAPACITORS			
	C2506,C2527		CEHAT220M2D
	C2502		CEHAT221M16
	C2524,C2525		CEHAT470M16
	C2501,C2503-C2505,C2507,C2508		CKSRYF104Z50
	C2513,C2515-C2517,C2519,C2530		CKSRYF104Z50
RESISTORS			
	R2502,R2504		RAB4C101J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN2501,CN2502	15P CONNECTOR	AKM1200
[Y DRIVE DD-CON BLOCK]			
SEMICONDUCTORS			
	IC2715-IC2717		AN1431M
	IC2709		HCNR201
	IC2708,IC2710,IC2718		M5223AFP
	IC2711		MIP0223SC
	IC2701		MIP161
	IC2704		MIP301
	IC2702,IC2703,IC2705-IC2707		TLP181(GR)
	IC2712-IC2714		TLP181(GR)
	Q2701,Q2703		2SC2712
	Q2704		HN1A01FU
	D2712,D2717,D2718,D2732,D2734		1SS355
	D2736,D2737		1SS355
	D2704,D2706,D2707,D2715,D2726		D1FL20U(S)
	D2728		D1FL20U(S)
	D2702,D2714,D2727		D1FL40
	D2711		D1FS4
	D2725		EC8FS6
	D2733		RD110P
	D2724		U1ZB330
	D2713		U1ZB36
	D2740		UDZ12B
	D2709,D2716		UDZ3.6B
	D2729,D2731		UDZ33B
	D2703,D2710		UDZ36B
	D2720,D2730,D2739		UDZS5.6B
COIL			
	L2701	RADIAL LEAD INDUCTOR	ATH1110
TRANSFORMERS			
	T2702		ATK1150
	T2703		ATK1151
	T2701		ATK1152

Mark	No.	Description	Part No.
CAPACITORS			
	C2701,C2735 (22μF/315V)		ACH1345
	C2706,C2725,C2737		CEHAT101M16
	C2709,C2718,C2720,C2739,C2745		CEHAT101M25
	C2708		CEHAT101M2A
	C2740		CEHAT101M2C
	C2704		CEHAT221M25
	C2715		CEHAT331M16
	C2746		CEHAT331M25
	C2723,C2751		CEHAT470M16
	C2712		CEHAT471M35
	C2711		CKSRYB103K50
	C2705,C2713,C2714,C2719		CKSRYB104K16
	C2721,C2722,C2724,C2727,C2729		CKSRYB104K16
	C2731,C2733,C2736,C2742,C2743		CKSRYB104K16
	C2747-C2749		CKSRYB104K16
	C2728,C2730		CKSRYB471K50
	C2707,C2738		CKSRYF104Z50
RESISTORS			
	R2735,R2791		RS1/16S1000F
	R2780		RS1/16S1103F
	R2715,R2728,R2733		RS1/16S1201F
	R2787		RS1/16S1302F
	R2766		RS1/16S1501F
	R2785		RS1/16S1503F
	R2777,R2786		RS1/16S1802F
	R2776		RS1/16S2702F
	R2705,R2706,R2709,R2710,R2778		RS1/16S3002F
	R2781		RS1/16S3002F
	R2783		RS1/16S4701F
	R2734,R2736		RS1/16S4702F
	R2779		RS1/16S5102F
	R2773		RS1/16S5601F
	R2784		RS1/16S5602F
	R2782		RS1/16S6801F
	R2744-R2746,R2748-R2753		RS1/16S9102F
	R2711,R2716,R2767,R2770		RS1/2S102J
	R2788,R2792		RS1/2S561J
	R2771,R2772		RS1/2S823J
	R2712		RS3LMF272J
	VR2702,VR2703 (1kΩ)		ACP1089
	VR2701 (2.2kΩ)		ACP1090
	Other Resistors		RS1/16S□□□J

SUB ADDRESS A ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC8801,IC8802,IC8804		M5223AFP
	IC8803		TC74VHC74FT
	Q8801,Q8802		2SA1163
	Q8803-Q8805,Q8808		2SC2712
	Q8806		2SK209
	D8801-D8803,D8809		1SS355
	D8806,D8807		DA227
	D8808		UDZ27B
	D8804		UDZS5.1B
COILS			
	L8801	CHOKE COIL (100μH/0.45A)	ATH1074
	L8802,L8803	COIL (22μH/0.11A)	ATH1081
CAPACITORS			
	C8806		CCSRCH101J50
	C8822		CEHV100M16
	C8804		CEHV100M35
	C8801,C8808		CEHV470M16
	C8807		CEVNP2R2M35
	C8802,C8803,C8805,C8809-C8817		CKSRYF104Z16
	C8820,C8821		CKSRYF104Z16
RESISTORS			
	R8806,R8807,R8837,R8838,R8841		RS1/16S1002D
	R8858		RS1/16S1202D
	R8828,R8829,R8832,R8846,R8864		RS1/16S2202D
	R8826,R8827,R8839,R8840		RS1/16S4701D
	R8833		RS1/16S4702F
	R8859		RS1/16S5602F
	R8801,R8802		RS1/2S1R5J
	R8803-R8805		RS1/2S2R2J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN8803	23P CONNECTOR	AKM1205
	CN8801	PH CONNECTOR	S3B-PH-SM3
	CN8802	PH CONNECTOR	S8B-PH-SM3

SUB ADDRESS B ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC8901,IC8902,IC8904		M5223AFP
	IC8903		TC74VHC74FT
	Q8901,Q8902		2SA1163
	Q8903-Q8905,Q8908		2SC2712
	Q8906		2SK209
	D8901-D8903,D8909		1SS355
	D8906,D8907		DA227
	D8908		UDZ27B
	D8904		UDZS5.1B
COILS			
	L8901	CHOKE COIL (100μH/0.45A)	ATH1074
	L8902,L8903	COIL (22μH/0.11A)	ATH1081
CAPACITORS			
	C8906		CCSRCH101J50
	C8922		CEHV100M16
	C8904		CEHV100M35
	C8901,C8908		CEHV470M16
	C8907		CEVNP2R2M35
	C8902,C8903,C8905,C8909-C8917		CKSRYF104Z16
	C8920,C8921		CKSRYF104Z16
RESISTORS			
	R8906,R8907,R8937,R8938,R8941		RS1/16S1002D
	R8958		RS1/16S1202D
	R8928,R8929,R8932,R8946,R8964		RS1/16S2202D
	R8926,R8927,R8939,R8940		RS1/16S4701D
	R8933		RS1/16S4702F
	R8959		RS1/16S5602F
	R8901,R8902		RS1/2S1R5J
	R8903-R8905		RS1/2S2R2J
	Other Resistors		RS1/16S□□□J

Mark	No.	Description	Part No.
OTHERS			
	CN8903	23P CONNECTOR	AKM1205
	CN8901	PH CONNECTOR	S3B-PH-SM3
	CN8902	PH CONNECTOR	S8B-PH-SM3

DIGITAL VIDEO ASSY

[INTERFACE BLOCK]

SEMICONDUCTORS			
	IC1001-IC1008		TC74VHC541FT
FILTERS			
	F1001-F1006	EMI FILTER	ATF1194
CAPACITORS			
	C1001-C1008		CKSRYF104Z16
RESISTORS			
	R1044		RAB4C101J
	R1001-R1007,R1036,R1063-R1069		RAB4C103J
	R1008-R1017,R1019,R1020,R1027		RAB4C470J
	R1032,R1034,R1035,R1037,R1038		RAB4C470J
	R1040-R1043,R1048,R1049		RAB4C470J
	R1051-R1054		RAB4C470J
	Other Resistors		RS1/16S□□□J
OTHERS			
	CN1003,CN1004	50P CONNECTOR	AKM1201
	K1001	TEST PIN	AKX9002
	CN1001	PH CONNECTOR	B12B-PH-SM3

[PANEL UCOM BLOCK]

SEMICONDUCTORS			
	IC1101		HD64F2328VF
	IC1103		NC7SZ08P5
	IC1102		PST9228N
	Q1101,Q1103		DTC143EK
	D1101		AEL1171
CAPACITORS			
	C1123,C1124		CCSRCH7R0D50
	C1101		CEV101M4
	C1102,C1109,C1110,C1112-C1116		CKSRYB102K50
	C1129-C1132		CKSRYB102K50
	C1117,C1121		CKSRYB103K50
	C1120		CKSRYB472K50
	C1103-C1108,C1111,C1118,C1119		CKSRYF104Z16
	C1122,C1125-C1128		CKSRYF104Z16
RESISTORS			
	R1104,R1107,R1110,R1113,R1114		RAB4C472J
	R1116,R1121,R1124,R1127,R1129		RAB4C472J
	R1128		RD1/4PU473J
	Other Resistors		RS1/16S□□□J
OTHERS			
	K1101-K1104,K1107,K1108	TEST PIN	AKX9002
	X1101	CERAMIC RESONATOR (25MHz)	ASS1160

[MODULE UCOM BLOCK]

SEMICONDUCTORS			
	IC1204		24LC04B(I)SN
	IC1208		PST9246N
	IC1202		TC74VHC08FT
	IC1201		TC74VHC21FT
	IC1205		TC74VHC541FT
	IC1203		TC74VHCT541AFT
	IC1206		TC7W126FU
	D1201,D1202		1SS355
CAPACITORS			
	C1213,C1243-C1245		CCSRCH470J50
	C1235,C1236		CCSRCH7R0D50
	C1225,C1232		CEV470M6R3
	C1201-C1203,C1206-C1211		CKSRYB102K50
	C1214-C1216,C1218,C1219		CKSRYB102K50
	C1223,C1224,C1226,C1227,C1229		CKSRYB102K50
	C1237,C1238,C1241,C1242,C1247		CKSRYB102K50
	C1234		CKSRYB103K50
	C1233		CKSRYB472K50
	C1204,C1205,C1212,C1217		CKSRYF104Z16
	C1221,C1222,C1228,C1230,C1231		CKSRYF104Z16
	C1239,C1240,C1246,C1248-C1250		CKSRYF104Z16
RESISTORS			
	R1209,R1214,R1245		RAB4C101J
	R1242		RAB4C103J
	R1207		RAB4C123J
	R1213,R1216		RAB4C473J
	Other Resistors		RS1/16S□□□J
OTHERS			
	X1201	CERAMIC RESONATOR (16MHz)	ASS1159
	CN1203	PH CONNECTOR	B3B-PH-SM3
	CN1201,CN1202	8P PLUG	CKS3130

[DIGITAL BLOCK]

SEMICONDUCTORS			
	IC1802		FS781BZB
	IC1704		NC7SZ08P5
	IC1301,IC1401		PD6358A
	IC1703		PE5064A
	IC1501,IC1502,IC1601,IC1602		TC74VCX541FT
	IC1702,IC1801		TC74VHC541FT
	IC1803		TC74VHC74FT
	IC1701		TC74VHCT541AFT
	D1301-D1305		1SS226
FILTERS			
	F1301-F1304,F1501-F1505	EMI FILTER	ATF1194
	F1601-F1605	EMI FILTER	ATF1194
CAPACITORS			
	C1807		CCSRCH271J50
	C1802		CEV100M16
	C1306,C1322,C1406,C1422,C1711		CEV101M4
	C1806		CEV101M4
	C1504-C1508,C1604-C1608,C1712		CKSRYB102K50

Mark	No.	Description	Part No.
	C1303-C1305,C1307-C1321		CKSRYF104Z16
	C1323-C1336,C1403-C1405		CKSRYF104Z16
	C1407-C1421,C1423-C1436,C1501		CKSRYF104Z16
	C1503,C1601,C1603,C1701-C1710		CKSRYF104Z16
	C1713,C1803-C1805		CKSRYF104Z16
	RESISTORS		
	R1502,R1517,R1606,R1622		RAB4C101J
	R1307,R1310-R1315,R1317,R1318		RAB4C220J
	R1321,R1322,R1326-R1344,R1407		RAB4C220J
	R1410-R1415,R1417,R1418		RAB4C220J
	R1421,R1422,R1426-R1444		RAB4C220J
	R1501,R1514,R1607,R1627,R1701		RAB4C470J
	R1703-R1709,R1712-R1717		RAB4C470J
	R1551,R1552		RS1/2S680J
	Other Resistors		RS1/16S□□□J
	OTHERS		
	CN1701	50P CONNECTOR	AKM1201
	CN1501,CN1502,CN1504,CN1505	55P CONNECTOR	AKM1202
	CN1601,CN1602,CN1604,CN1605	55P CONNECTOR	AKM1202
	K1301,K1302,K1308,K1311-K1314	TEST PIN	AKX9002
	K1316,K1321,K1324,K1326-K1331	TEST PIN	AKX9002
	K1333,K1501,K1502,K1601,K1602	TEST PIN	AKX9002
	K1728,K1729	TEST PIN	AKX9002
	X1801	CRYSTAL RESONATOR (50.000MHz)	ASS1146
	CN1503,CN1603	PH CONNECTOR	B8B-PH-SM3
	CN1301	8P PLUG	CKS3130
	CN1702	30P CONNECTOR	KF050HA30L
	[D-D CONVERTER BLOCK]		
	SEMICONDUCTORS		
	Q1902,Q1905,Q1907		2SC2712
	Q1903		DTC143EK
	Q1901,Q1904,Q1906		HN1C01FU
	D1903-D1906,D1911,D1912		1SS355
	D1908		HZU2.2B
	D1902,D1909		UDZ3.6B
	D1907		UDZS5.1B
	D1901		UDZS6.8B
	CAPACITORS		
	C1904,C1906,C1912		CEV220M16
	C1901-C1903,C1905,C1907-C1911		CKSRYF104Z16
	RESISTORS		
	R1935,R1936		RS1/2S680J
	Other Resistors		RS1/16S□□□J
	OTHERS		
	K1901-K1906	TEST PIN	AKX9002
	1901	DC-DC CONVERTER	AXY1054
	CN1901	PH CONNECTOR	B13B-PH-SM3

Mark	No.	Description	Part No.
	MR INTERFACE ASSY		
	[INTERFACE BLOCK]		
	SEMICONDUCTORS		
	IC4011		CXA1875AM
	IC4007,IC4010		M5223AFP
	IC4005		M62320FP
	IC4001		PQ05DZ51
	IC4002-IC4004		PQ20VZ1U
	IC4013		PST9228N
	IC4008,IC4009		TC74HC00AF
	IC4012		TC74HC4066AF
	IC4006		TC74VHCT541AFT
	Q4003,Q4004,Q4010		2SA1162
	Q4007,Q4009,Q4013,Q4017,Q4018		2SC2712
	Q4012,Q4016,Q4019-Q4022		DTC124EK
	Q4014		HN1A01FU
	Q4008		HN1B04FU
	Q4001,Q4002,Q4005,Q4006		HN1C01FU
	Q4011,Q4015		RN2902
	D4007,D4008		1SS184
	D4002-D4006		1SS355
	SWITCHES		
	S4001,S4004		ASH1010
	CAPACITORS		
	C4023,C4036,C4037		CCSRCH102J50
	C4025,C4032		CCSRCH220J50
	C4029,C4030,C4053,C4054		CCSRCH471J50
	C4001,C4004,C4005,C4008,C4010		CEAT101M10
	C4012,C4013,C4016,C4041,C4042		CEAT101M10
	C4034,C4038,C4050,C4056		CKSRYB105K6R3
	C4043		CKSRYB474K10
	C4027,C4028,C4033,C4051		CKSRYF103Z50
	C4002,C4003,C4006,C4007		CKSRYF104Z16
	C4014,C4015,C4017-C4019,C4024		CKSRYF104Z16
	C4026,C4031,C4035,C4039,C4040		CKSRYF104Z16
	C4044-C4047,C4049,C4052,C4055		CKSRYF104Z16
	RESISTORS		
	R4019,R4035,R4054,R4066		RAB4C101J
	R4056		RAB4C471J
	R4007,R4014,R4015,R4117		RS1/16S1001F
	R4106		RS1/16S1002F
	R4107		RS1/16S1502F
	R4098		RS1/16S2201F
	R4078		RS1/16S2202F
	R4074,R4094		RS1/16S3301F
	R4075		RS1/16S4701F
	R4057		RS1/16S5601F
	R4124		RS1/16S5602F
	R4004,R4005,R4115,R4116		RS1/16S8200F
	R4093		RS1/16S8201F
	R4006		RS2MMF2R2J
	Other Resistors		RS1/16S□□□J

Mark	No.	Description	Part No.
OTHERS			
	CN4004,CN4005	50P CONNECTOR	AKM1180
	CN4002	20P SOCKET	AKP1194
	CN4003	24P DVI SOCKET	AKP1216
	CN4006,CN4009	3P PH CONNECTOR	B3B-PH-SM3
	CN4007	7P PH CONNECTOR	B7B-PH-SM3
	CN4008	8P PLUG	CKS3130
[TMDS RECEIVER BLOCK]			
SEMICONDUCTORS			
	IC4201		24LC01B
	IC4203		24LC128(I)SN
	IC4202		24LC32A
	IC4205		PST9228N
	IC4204		SII861CM208
	Q4209,Q4212		2SA1162
	Q4205,Q4206,Q4213		DTA124EK
	Q4203,Q4204,Q4207,Q4208		DTC124EK
	Q4210,Q4211,Q4214		DTC124EK
	Q4201,Q4202		HN1C01FU
	D4201		1SS184
	D4203,D4204		1SS226
	D4205-D4209		1SS355
	D4202		RD6.8MB
FILTERS			
	F4201,F4203-F4205	EMI FILTER	ATF1194
CAPACITORS			
	C4208,C4210,C4215,C4222,C4230		CCSRCH331J50
	C4255,C4257		CCSRCH331J50
	C4262		CCSRCH471J50
	C4206,C4207,C4212,C4214,C4217		CCSRCH820J50
	C4219,C4220,C4224,C4227,C4229		CCSRCH820J50
	C4231-C4233,C4236,C4241,C4244		CCSRCH820J50
	C4248,C4253,C4254,C4258		CCSRCH820J50
	C4239,C4242,C4246,C4250		CEAT101M10
	C4202,C4237,C4238		CEAT470M10
	C4264		CKSRYB103K50
	C4265		CKSRYB105K6R3
	C4260		CKSRYB472K50
	C4263		CKSRYB474K10
	C4201,C4203-C4205,C4209,C4211		CKSRYF104Z16
	C4213,C4216,C4218,C4221,C4225		CKSRYF104Z16
	C4234,C4235,C4240,C4243,C4245		CKSRYF104Z16
	C4247,C4251,C4252,C4256,C4259		CKSRYF104Z16
	C4261		CKSRYF104Z16
	C4223,C4226,C4228,C4249		CKSRYF105Z10
	C4266-C4270		CKSRYF105Z10
RESISTORS			
	R4213-R4217,R4245,R4247		RAB4C181J
	R4253-R4255		RAB4C181J
	R4241		RAB4C680J
	R4250		RS1/16S5100D
	Other Resistors		RS1/16S□□□J

Mark	No.	Description	Part No.
OTHERS			
	K4201-K4207	TEST PIN	AKX9002
	X4201	CRYSTAL RESONATOR (16.000MHz)	ASS1163
[AUDIO BLOCK]			
SEMICONDUCTORS			
	Q4403		2SA1162
	Q4401,Q4402		2SC2712
	D4401-D4404		1SS355
CAPACITORS			
	C4408,C4417		CEANP100M50
	C4403		CEAT101M10
	C4407		CEAT101M25
	C4402		CEAT220M50
	C4425,C4426		CEAT470M25
	C4410		CKSRYF104Z16
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	CN4403	7P PH CONNECTOR	B7B-PH-SM3
	CN4404	8P PH CONNECTOR	B8B-PH-SM3
LED ASSY			
SEMICONDUCTOR			
	D4751		AEL1170
OTHERS			
	CN4751	3P PH CONNECTOR	S3B-PH-SM3
FRONT KEY ASSY			
SWITCHES			
	S4801-S4806		ASG1088
CAPACITORS			
	C4801-C4803		CKSRYF104Z16
RESISTORS			
	All Resistors		RS1/16S□□□J
OTHERS			
	CN4801	6P FFC CONNECTOR	AKM1208
FRONT KEY CONN ASSY			
SEMICONDUCTORS			
	D4851,D4852		1SS226
OTHERS			
	CN4851	6P FFC CONNECTOR	AKM1208
	CN4852	4P PH CONNECTOR	B4B-PH-SM3

Mark	No.	Description	Part No.

IR (P) ASSY

SEMICONDUCTORS

	Q4901		2SC2712
	D4901		1SS355

CAPACITORS

	C4901		CEV470M6R3
	C4902		CKSRYB103K50
	C4903		CKSRYB472K50
	C4904		CKSRYF104Z16

RESISTORS

	All Resistors		RS1/16S□□□J

OTHERS

	4901	REMOTE RECEIVER UNIT	GP1UM26RK

THERMAL SENSOR ASSY

SEMICONDUCTORS

	IC4702		LM50CIM3
	IC4701		M5223AFP

CAPACITORS

	C4705		CEV470M6R3
	C4704		CKSRYB103K50
	C4701		CKSRYF104Z16
	C4702,C4703		CKSRYF105Z10

RESISTORS

	R4706,R4708		RS1/16S3001F
	Other Resistors		RS1/16S□□□J

AUDIO AMP ASSY

SEMICONDUCTORS

	IC5202		CXA2021S
	IC5002		LA4628
	IC5201		NJM2193L
	IC5001		PQ12RD1B
	Q5002,Q5005		2SA1048
	Q5009,Q5012,Q5013		2SC2458

COIL

	L5001	FERRITE CORE	ATX1037

CAPACITORS

	C5203,C5227		CCCCH221J50
	C5213,C5226		CEHANP220M25
	C5232,C5233,C5235		CEHAT100M50
	C5015,C5029,C5033,C5201,C5206		CEHAT101M25
	C5242		CEHAT221M25
	C5032,C5034		CEHAT2R2M50
	C5044,C5050,C5051		CEHAT330M25
	C5005		CEHAT331M16
	C5238		CEHAT470M16
	C5002		CEHAT471M16
	C5013		CEHAT472M25
	C5208,C5211,C5212,C5218		CEHAT4R7M50
	C5222,C5223,C5234		CEHAT4R7M50
	C5045		CEHATR47M50
	C5014,C5204,C5217,C5220,C5228		CFTLA103J50
	C5237		CFTLA103J50
	C5035,C5046,C5053,C5056,C5216		CFTLA104J50
	C5221,C5239		CFTLA104J50
	C5214,C5230		CFTLA224J50
	C5225		CFTLA333J50
	C5219,C5236		CFTLA473J50
	C5003,C5006,C5016,C5042,C5207		CKCYB103K50
	C5210		CKCYB103K50
	C5043,C5052,C5205,C5229		CQMA122J50
	C5224		CQMA222J50
	C5215,C5231		CQMA392J50

RESISTORS

	R5053,R5054,R5075,R5076		RD1/2MMF2R2J
	R5001		RD1/2MMF3R9J
	Other Resistors		RD1/4PU□□□J

OTHERS

	J5003	6P HOUSING WIRE	ADX2729
	J5002	8P HOUSING WIRE	ADX2731
	5006	FERRITE CORE HOLDER	AEC1818
	KN5001	GROUND PLATE	ANK-142
	5001,5002,5004,5005	SCREW	VBB30P100FNI

SP TERMINAL ASSY

COILS

⚠	L5301,L5352	LINE FILTER		ATF1206

CAPACITORS

⚠	C5301,C5305,C5351,C5355		CCCCH221J50
⚠	C5302,C5352		CKCYB332K50
⚠	C5303,C5353		CKCYF473Z50

RESISTORS

⚠	R5301,R5302,R5351,R5352		RD1/2MMF100J

OTHERS

	CN5301	4P SPEAKER TERMINAL	AKE1058

6. ADJUSTMENT

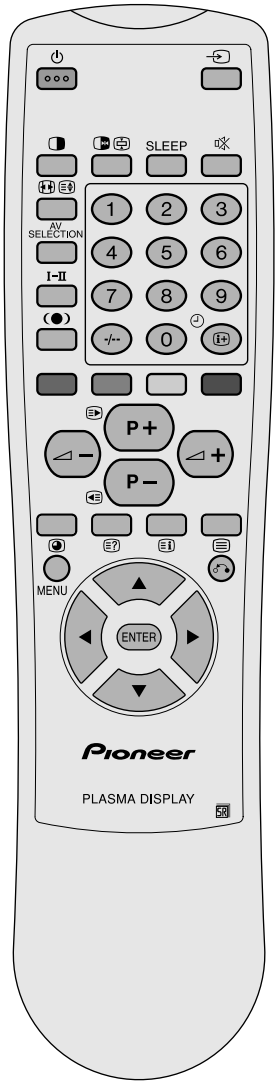
6.1 SERVICE FACTORY MODE

Service factory mode uses an OSD function of the Media Receiver (PDP-R03E or PDP-R03U).
Perform the adjustment and setting in the state that this unit and Media Receiver are connected by the system.
Plasma display cannot use a factory mode by being simple.

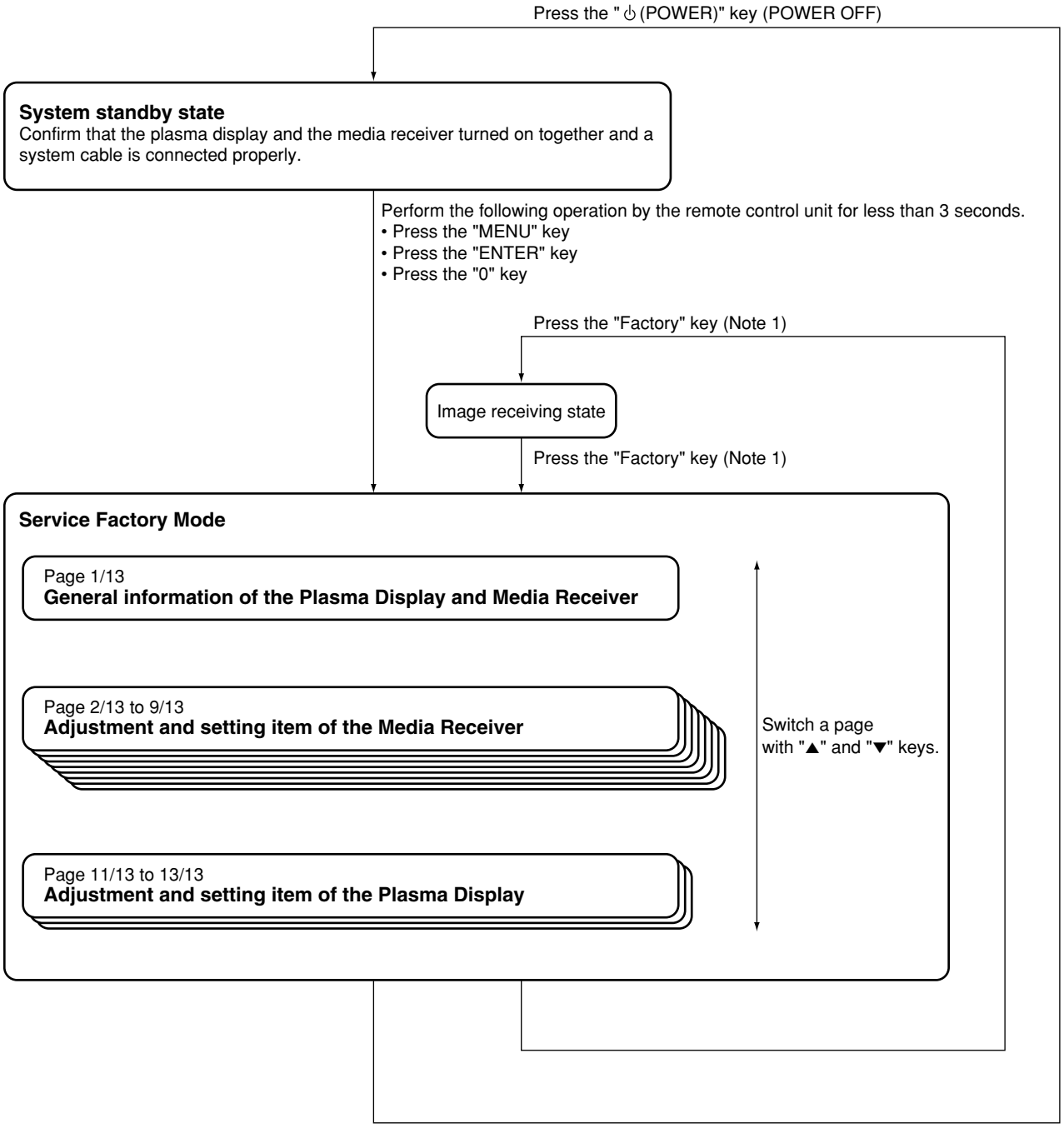
■ Remote Control Unit Operation in The Service Factory Mode

Operate the service factory mode with the remote control unit (AXD1463 or AXD1460) of accessory of the media receiver.
Please perform the adjustment by operating the following keys.

Remote Control Key	Function
P + key	One line moves the selection cursor of the adjustment item up.
P – key	One line moves the selection cursor of the adjustment item down.
VOL ◿ + key	+1 raises a adjustment value
VOL ◿ – key	–1 reduces a adjustment value
▲ key	Perform page down (previous page)
▼ key	Perform page up (next page)
◄ key	–10 reduces a adjustment value
► key	+10 raises a adjustment value



6.1.1 How to Enter the Service Factory Mode

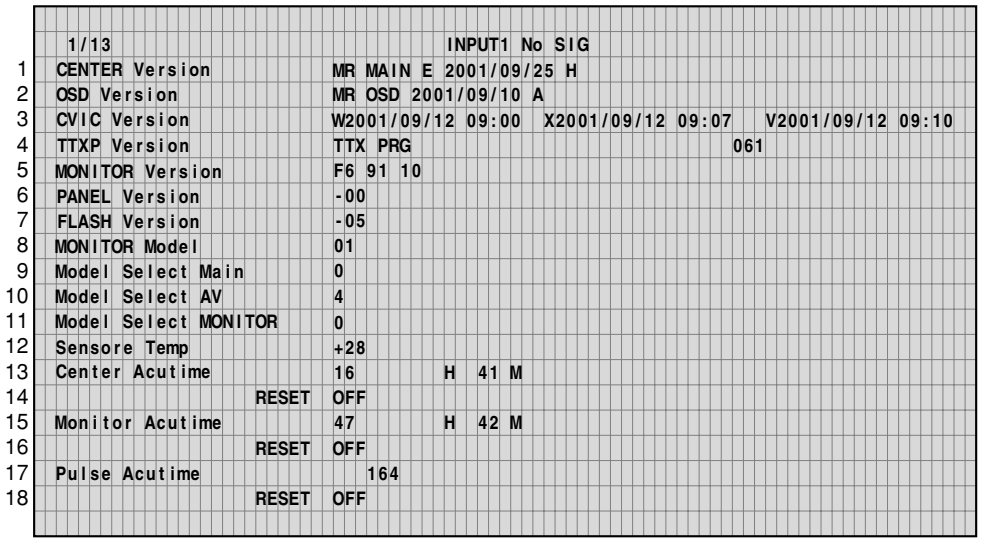

Press the " ⏻ (POWER)" key (POWER OFF)
System standby state
Confirm that the plasma display and the media receiver turned on together and a system cable is connected properly.
Perform the following operation by the remote control unit for less than 3 seconds.
• Press the "MENU" key
• Press the "ENTER" key
• Press the "0" key
Press the "Factory" key (Note 1)
Image receiving state
Press the "Factory" key (Note 1)
Service Factory Mode
Page 1/13
General information of the Plasma Display and Media Receiver
Page 2/13 to 9/13
Adjustment and setting item of the Media Receiver
Page 11/13 to 13/13
Adjustment and setting item of the Plasma Display
Switch a page
with "▲" and "▼" keys.

Note 1: When use the adjustment exclusive use remote control unit with a [AA5F] code.

* : Be careful so that there is the case that page constitution is different.

6.1.2 General Information of the Plasma Display and Media Receiver

- **Display example of the first page**

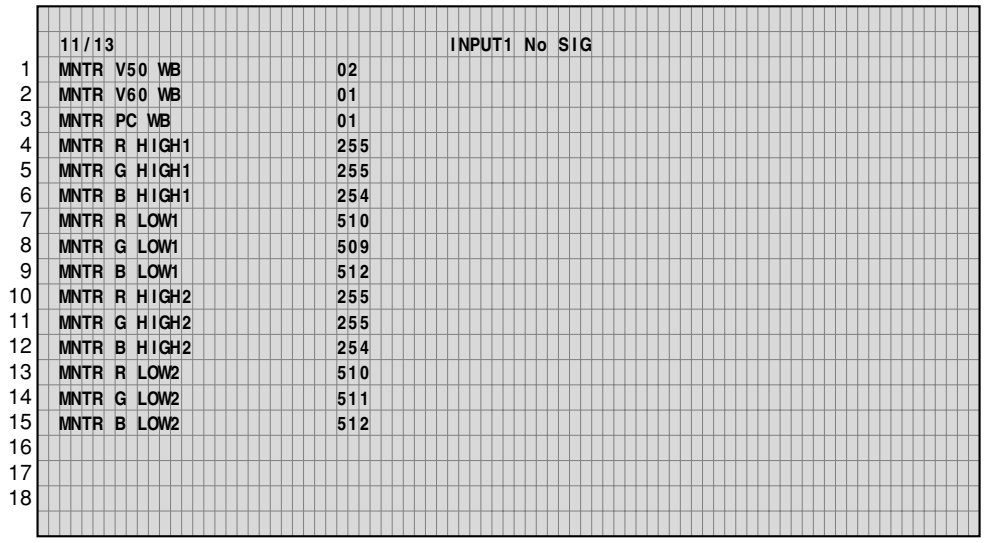

1/13
INPUT1 No SIG
1 CENTER Version MR MAIN E 2001/09/25 H
2 OSD Version MR OSD 2001/09/10 A
3 CVIC Version W2001/09/12 09:00 X2001/09/12 09:07 V2001/09/12 09:10
4 TTXP Version TTX PRG 061
5 MONITOR Version F6 91 10
6 PANEL Version -00
7 FLASH Version -05
8 MONITOR Model 01
9 Model Select Main 0
10 Model Select AV 4
11 Model Select MONITOR 0
12 Sensore Temp +28
13 Center Acutime 16 H 41 M
14 RESET OFF
15 Monitor Acutime 47 H 42 M
16 RESET OFF
17 Pulse Acutime 164
18 RESET OFF

No.	Item	Explanation
1	Main software version information of the media receiver	
2	OSD version information of the media receiver	
3	IP/resize IC control software version information of the media receiver	
4	Text microcomputer software version information of the media receiver	
5	Module microcomputer software version information of the PDP	
6	Panel microcomputer version information of the PDP	Reference
7	Panel flash ROM version information of the PDP	
8	PDP model information	01: PIONEER 50 inches, 02: PIONEER 43 inches, 11: SHARP 50 inches, 12: SHARP 43 inches
9	Media receiver model information	
10	Media receiver model information	
11	PDP destination information	0: All SHARP destinations, Japanese and North America destinations of PIONEER, 3: European and general destinations of PIONEER
12	Temperature information of panel temperature sensor on the PDP	This is internal temperature information. This is not establishment environment temperature.
13	Media receiver accumulation operating time	
14	Media receiver accumulation operating time reset	Turn the display to [ON] by pressing the "VOL +" key, then it becomes [0H] when pressing the "ENTER" key.
15	PDP accumulation operating time	
16	PDP accumulation operating time reset	Turn the display to [ON] by pressing the "VOL +" key, then it becomes [0H] when pressing the "ENTER" key.
17	PDP accumulation pulse number	Real accumulation pulse number becomes "indicated value *10,000,000 pulse".
18	PDP accumulation pulse number reset	Turn the display to [ON] by pressing the "VOL +" key, then it becomes [0] when pressing the "ENTER" key.

* : Be careful so that there is the case that page constitution is different.

6.1.3 Adjustment and Setting Item of the Plasma Display

● **Display example of the eleventh page**

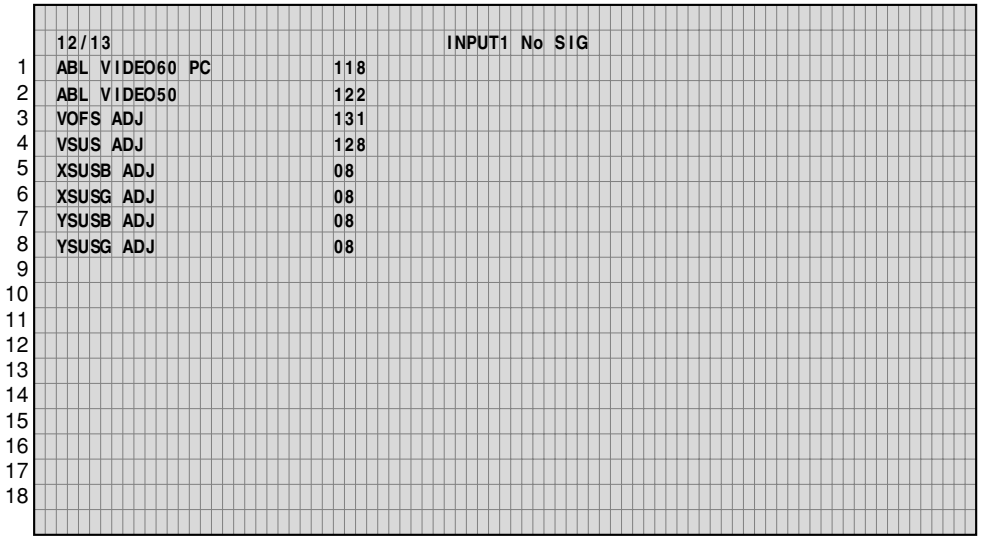

11/13
INPUT1 No SIG
1 MNTR V50 WB 02
2 MNTR V60 WB 01
3 MNTR PC WB 01
4 MNTR R HIGH1 255
5 MNTR G HIGH1 255
6 MNTR B HIGH1 254
7 MNTR R LOW1 510
8 MNTR G LOW1 509
9 MNTR B LOW1 512
10 MNTR R HIGH2 255
11 MNTR G HIGH2 255
12 MNTR B HIGH2 254
13 MNTR R LOW2 510
14 MNTR G LOW2 511
15 MNTR B LOW2 512
16
17
18

No.	Item	Adjustable Range	Shipping Setting	Storage Place
1	PDP_W/B table selection at VIDEO 50Hz	1 or 2	2	PDP
2	PDP_W/B table selection at VIDEO 60Hz	1 or 2	1	PDP
3	PDP_W/B table selection at PC	1 or 2	1	PDP
4	RED_GAIN of PDP_W/B table 1	0 to 255	Factory adjustment value	PDP
5	GREEN_GAIN of PDP_W/B table 1	0 to 255	Factory adjustment value	PDP
6	BLUE_GAIN of PDP_W/B table 1	0 to 255	Factory adjustment value	PDP
7	RED_OFS of PDP_W/B table 1	0 to 999	Factory adjustment value	PDP
8	GREEN_OFS of PDP_W/B table 1	0 to 999	Factory adjustment value	PDP
9	BLUE_OFS of PDP_W/B table 1	0 to 999	Factory adjustment value	PDP
10	RED_GAIN of PDP_W/B table 2	0 to 255	Factory adjustment value	PDP
11	GREEN_GAIN of PDP_W/B table 2	0 to 255	Factory adjustment value	PDP
12	BLUE_GAIN of PDP_W/B table 2	0 to 255	Factory adjustment value	PDP
13	RED_OFS of PDP_W/B table 2	0 to 999	Factory adjustment value	PDP
14	GREEN_OFS of PDP_W/B table 2	0 to 999	Factory adjustment value	PDP
15	BLUE_OFS of PDP_W/B table 2	0 to 999	Factory adjustment value	PDP

Caution in the PDP W/B (No.4 to 15) adjustment:
Adjustment value is reflected without relation in input signal during adjustment to the actual PDP.
For example, when operate a adjustment value of [MNTR HIGH1] during PAL input, switch to the adjustment value operation of W/B table 1 while displaying PAL in the actual PDP.
This is temporary.
After adjustment, it becomes the W/B table 2 operation in the PAL input after restarted in the normal mode. It becomes an operation of the W/B table 1 adjustment value after adjustment in the NTSC input.
As for the above example, table selection (No. 1 and 2) becomes the shipping setting.

＊ : Be careful so that there is the case that page constitution is different.

● **Display example of the twelfth page**



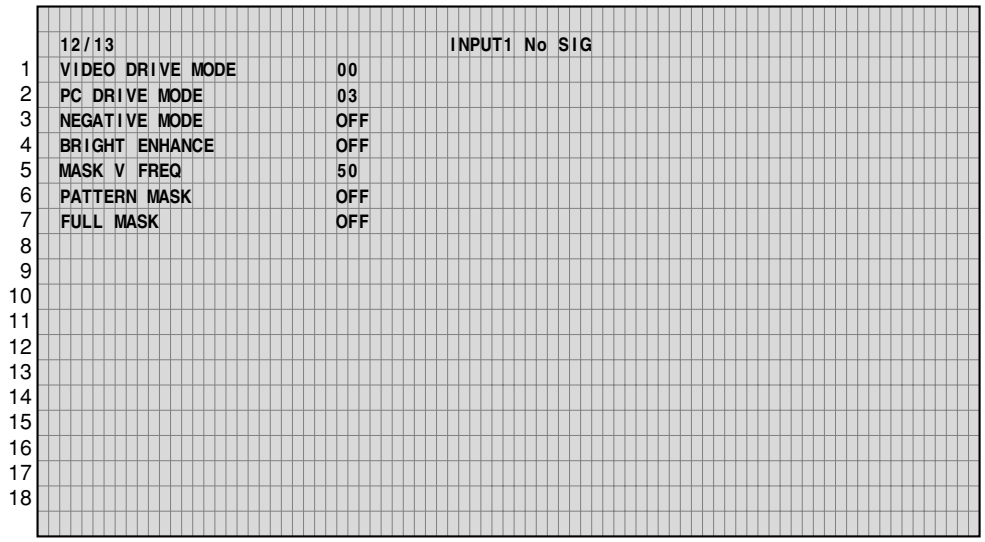
No.	Item	Adjustable Range	Shipping Setting	Storage Place
1	Electric power setting at the PC, VIDEO 60Hz	0 to 255	Factory adjustment value	PDP
2	Electric power setting at VIDEO 50Hz	0 to 255	Factory adjustment value	PDP
3	VOFS voltage setting	0 to 255	Factory adjustment value	PDP
4	VSUS voltage setting	0 to 255	Factory adjustment value	PDP
5	SUS_B timing setting of X drive	0 to 15	Factory adjustment value	PDP
6	SUS_G timing setting of X drive	0 to 15	Factory adjustment value	PDP
7	SUS_B timing setting of Y drive	0 to 15	Factory adjustment value	PDP
8	SUS_G timing setting of Y drive	0 to 15	Factory adjustment value	PDP

Adjustment item of this page is related in damage of the set when mistakes adjustment. When adjustment is needed, be enough careful to adjustment.

Caution in the electric power setting (No. 1 and 2) adjustment:
Adjustment value is reflected without relation in input signal during adjustment to the actual PDP.
For example, when operate a adjustment value of [ABL VIDEO 60 PC] during PAL input, switch to the adjustment value operation of [ABL VIDEO 60 PC] while displaying PAL in the actual PDP. This is temporary.
After adjustment, it becomes the [ABL VIDEO 50] operation in the PAL input after restarted in the normal mode. It becomes an operation of the [ABL VIDEO 60PC] adjustment value after adjustment in the NTSC input.

＊ : Be careful so that there is the case that page constitution is different.

● **Display example of the thirteenth page**



No.	Item	Adjustable Range	Shipping Setting	Storage Place
1	Drive mode selection at VIDEO	0 to 5	0	PDP
2	Drive mode selection at PC	0 to 5	3	PDP
3	Negative positive inversion mode	OFF/ON	OFF	PDP
4	Bright enhance	OFF/ON	OFF	None
5	Refresh rate at mask signal generation	50/60/70	–	None
6	Pattern mask signal generation	OFF/	OFF	PDP
7	Full mask signal generation	OFF/	OFF	PDP

Caution in the mask (generation test signal screen in the PDP inside) signal generation:

- A pattern mask and a full mask can use only either.
  Therefore, turn a full mask to OFF when uses a pattern mask. Also turn a pattern mask to OFF when uses a full mask.
- A pattern mask and a full mask are test signal screens occurring together in the PDP inside. Therefore, in the mask signal generation, it cannot confirm video inputting from OSD and the outside.
  When release mask setting or change of each setting or perform the confirmation of the adjustment or external input signal, perform key operation of the main unit button or the remote control unit.
  When operated something, stop the generation of the mask signal just after that for two seconds. Therefore, modification and adjustment of each setting and confirmation of the external input signal are possible.

* : Be careful so that there is the case that page constitution is different.

6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ SW POWER SUPPLY Module

• When replaced

No adjustment required.

■ DIGITAL VIDEO Assy

• When repaired

No adjustment required.

• When replaced

• Remove IC1204 (24LC04(1) SN-TBB) from the former PC Board to replace, and install it to the new PC Board.

■ MR INTERFACE Assy

1. Remove IC4201 from the former PC Board to replace, and install it to the new PC Board.
2. Set slide SW according to page 22.

■ Y DRIVE Assy

• When repaired

1. VOFS/VH/IC5V voltage adjustment
2. Timing adjustment of pulse module

• When replaced

1. SUSB ground timing adjustment
2. Panel white balance adjustment

■ X DRIVE Assy

• When repaired

1. VRN voltage adjustment
2. Timing adjustment of pulse module

• When replaced

1. SUSB ground timing adjustment
2. Panel white balance adjustment

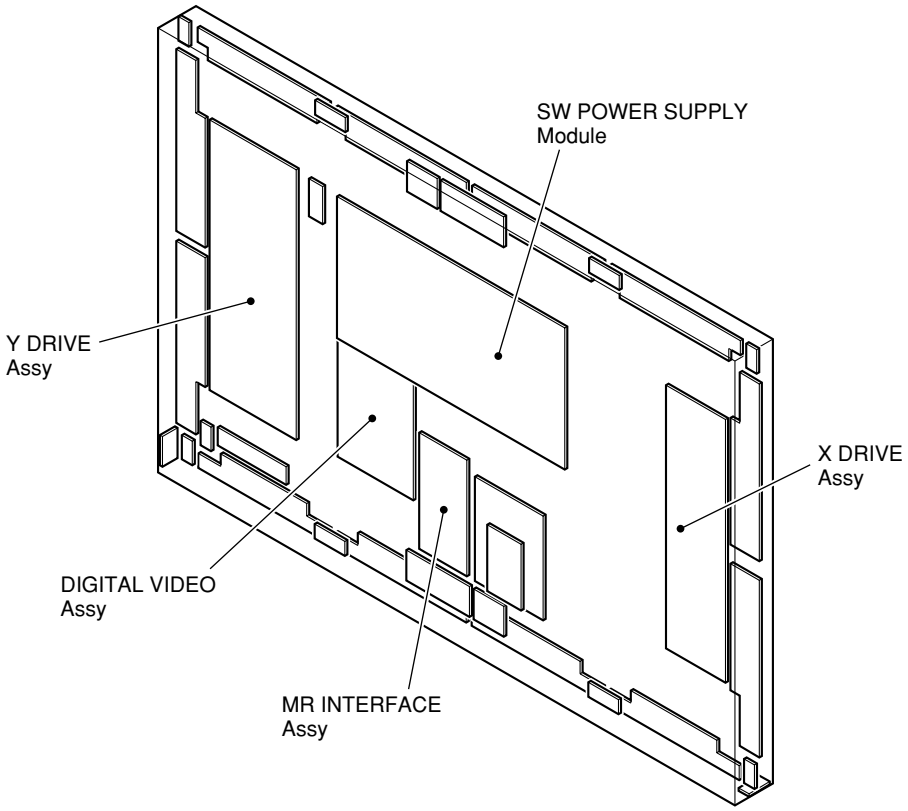


Fig. 1 PC Board Location (rear side view)

6.3 ADJUSTMENT

■ VOFS/VH/IC5V Voltage Adjustment

<table>
<tr><th>Input Signal</th><th>Adjusting Point</th><th>Adjusting Method</th></tr>
<tr><td rowspan="4">White 100%</td><td>VR2701 (VOFS)
(Y DRIVE Assy)</td><td>
VOFS (Offset voltage) adjustment
Method 1
1. Write down a adjustment value of VOFS ADJ in the factory mode.
2. Set this adjustment value to center (128).
3. Adjust VR2701 so that the voltage between K2701 (VOFS) and K2703 (SUS GND) becomes 45V.
4. Return it to the value that wrote down a adjustment value of V-OFFSET in step 1.

Method 2
1. Read the adjustment value of VOFS ADJ in the factory mode.
2. Adjust VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes following voltage ± 0.5V.

<table>
<tr><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th></tr>
<tr><td>VOF000</td><td>0.4</td><td>25</td><td>VOF134</td><td>2.599212598</td><td>45.94488</td></tr>
<tr><td>VOF006</td><td>0.4984375</td><td>25.9375</td><td>VOF141</td><td>2.71496063</td><td>47.04724</td></tr>
<tr><td>VOF013</td><td>0.61328125</td><td>27.03125</td><td>VOF147</td><td>2.814173228</td><td>47.99213</td></tr>
<tr><td>VOF019</td><td>0.71171875</td><td>27.96875</td><td>VOF153</td><td>2.913385827</td><td>48.93701</td></tr>
<tr><td>VOF026</td><td>0.8265625</td><td>29.0625</td><td>VOF160</td><td>3.029133858</td><td>50.03937</td></tr>
<tr><td>VOF032</td><td>0.925</td><td>30</td><td>VOF166</td><td>3.128346457</td><td>50.98425</td></tr>
<tr><td>VOF038</td><td>1.0234375</td><td>30.9375</td><td>VOF172</td><td>3.227559055</td><td>51.92913</td></tr>
<tr><td>VOF045</td><td>1.13828125</td><td>32.03125</td><td>VOF179</td><td>3.343307087</td><td>53.0315</td></tr>
<tr><td>VOF051</td><td>1.23671875</td><td>32.96875</td><td>VOF185</td><td>3.442519685</td><td>53.97638</td></tr>
<tr><td>VOF058</td><td>1.3515625</td><td>34.0625</td><td>VOF191</td><td>3.541732283</td><td>54.92126</td></tr>
<tr><td>VOF064</td><td>1.45</td><td>35</td><td>VOF198</td><td>3.657480315</td><td>56.02362</td></tr>
<tr><td>VOF070</td><td>1.5484375</td><td>35.9375</td><td>VOF204</td><td>3.756692913</td><td>56.9685</td></tr>
<tr><td>VOF077</td><td>1.66328125</td><td>37.03125</td><td>VOF211</td><td>3.872440945</td><td>58.07087</td></tr>
<tr><td>VOF083</td><td>1.76171875</td><td>37.96875</td><td>VOF217</td><td>3.971653543</td><td>59.01575</td></tr>
<tr><td>VOF090</td><td>1.8765625</td><td>39.0625</td><td>VOF223</td><td>4.070866142</td><td>59.96063</td></tr>
<tr><td>VOF096</td><td>1.975</td><td>40</td><td>VOF230</td><td>4.186614173</td><td>61.06299</td></tr>
<tr><td>VOF102</td><td>2.0734375</td><td>40.9375</td><td>VOF236</td><td>4.285826772</td><td>62.00787</td></tr>
<tr><td>VOF109</td><td>2.18828125</td><td>42.03125</td><td>VOF242</td><td>4.38503937</td><td>62.95276</td></tr>
<tr><td>VOF115</td><td>2.28671875</td><td>42.96875</td><td>VOF249</td><td>4.500787402</td><td>64.05512</td></tr>
<tr><td>VOF122</td><td>2.4015625</td><td>44.0625</td><td>VOF255</td><td>4.6</td><td>65</td></tr>
<tr><td>VOF128</td><td>2.5</td><td>45</td><td></td><td></td><td></td></tr>
</table>
The symptom is case of mis-adjustment
If the VOFS Voltage adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.
</td></tr>
<tr><td>VR2703 (VH)
(Y DRIVE Assy)</td><td>
VH (voltage for scan IC) Adjustment
Adjust so that the voltage between K2716 (VH) and K2720 (PSUS) becomes 103V ± 0.5V. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.

The symptom is case of mis-adjustment
If the VH adjustment is not performed properly, dots like blinking luminance points appear. If deviated greatly from the right adjustment point, panel will light white.
</td></tr>
<tr><td>VR2702 (IC5V)
(Y DRIVE Assy)</td><td>
IC5V Adjustment
Adjust so that the voltage between K2707 (IC5V) and K2720 (PSUS) becomes 5.0V ± 0.1V. PSUS (=GNDH) is a floating GND and the electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.
</td></tr>
<tr><td colspan="2">Note : Be sure to measure between specified test points.</td></tr>
</table>

■ Sustain Pulse Waveform Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	REF_DIG mode in Factory mode XSUSB ADJ YSUSB ADJ	**X-SUS-B, Y-SUS-B Adjustment** Set to the indicated value with the remote control unit. (Refer to "Timing adjustment of control signal of X and Y Drive Assys".)

■ VRN Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	VR3701 (VRN) (X DRIVE Assy)	**VRN (minus reset voltage adjustment)** Adjust so that the voltage between K3707 (VRN) and K3702 (SUS-GND) becomes -280V ± 1.0V.

■ Panel White Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method
		Adjust the parameter in the OFFSET-DIGITAL of factory mode as follows; PANEL R-HIGH 〜 PANEL B-LOW In this time, dispay uses the mask (MASK04) of factory mode. Reference : Adjustment values using the Media color-difference meter (A-100)

	MASK Left Side	MASK Right Side
x	294	293
y	303	294

* When perform the various adjustment by RS-232C control, execute a "DM0" command (release the limit of pulse number) beforehand.
  After the adjustment completion, execute a "DM 3" command (Limit of pulse number: 64%, shipping state) by all means.

■ Timing Adjustment of X and Y DRIVE Assys Control Signal

- **Purpose**
  - Pulse module loads in DRIVE Assy as one of heat measures of DRIVE Assy. Adjust the drive timing of the pulse module driving parallel with VR.
  - Pulse module has each peculiar delay time. Readjustment is necessary when replaced the pulse module in the X and Y DRIVE Assys.
- **Adjustment Method**

  CR delay circuit is each inserted on signal path of four control signals (SUS-U, SUS-B, SUS-D, SUS-G) driving the pulse module.
  Quantity of delay can adjust pulse module of one side with VR.
  Adjust VR while measuring a waveform of the pulse module, and match a timing.

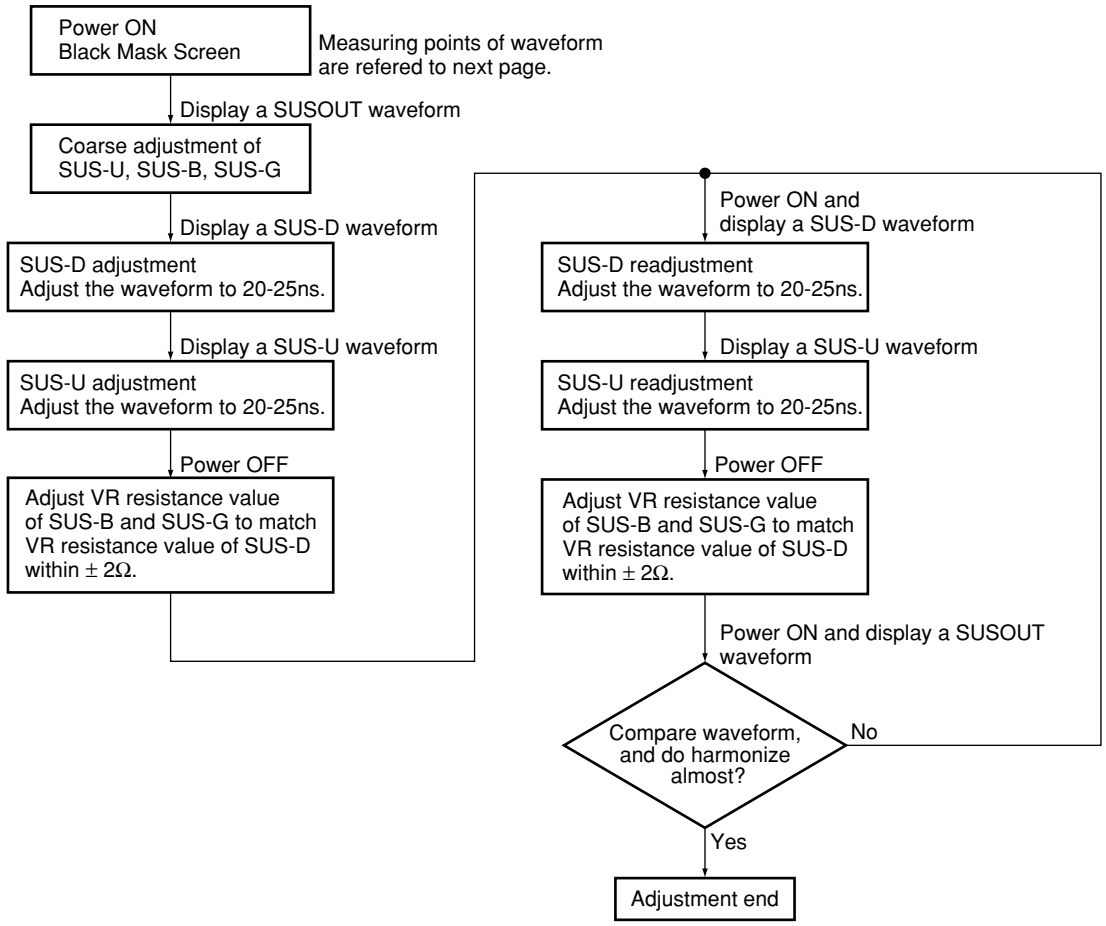
Adjustment VR

	X DRIVE	Y DRIVE
SUS-U	VR3203	VR2204
SUS-D	VR3202	VR2203
SUS-B	VR3201	VR2202
SUS-G	VR3200	VR2201

Test pin for adjustment and measurment

Pulse Module	X DRIVE		Y DRIVE	
	Upper	Lower	Upper	Lower
SUSOUT	K3105	K3106	K2212	K2203
SUS-U	K3200	K3204	K2220	K2224
SUS-D	K3108	K3205	K2207	K2225

- **Adjustment Procedure**


Power ON
Black Mask Screen
Measuring points of waveform are refered to next page.
Display a SUSOUT waveform
Coarse adjustment of SUS-U, SUS-B, SUS-G
Display a SUS-D waveform
SUS-D adjustment
Adjust the waveform to 20-25ns.
Display a SUS-U waveform
SUS-U adjustment
Adjust the waveform to 20-25ns.
Power OFF
Adjust VR resistance value of SUS-B and SUS-G to match VR resistance value of SUS-D within ± 2Ω.
Power ON and display a SUS-D waveform
SUS-D readjustment
Adjust the waveform to 20-25ns.
Display a SUS-U waveform
SUS-U readjustment
Adjust the waveform to 20-25ns.
Power OFF
Adjust VR resistance value of SUS-B and SUS-G to match VR resistance value of SUS-D within ± 2Ω.
Power ON and display a SUSOUT waveform
Compare waveform, and do harmonize almost?
No
Yes
Adjustment end

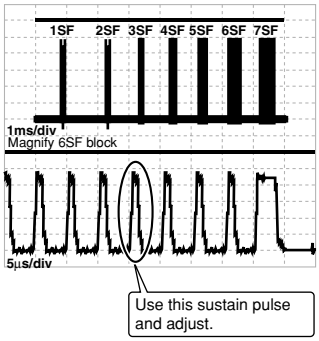
As for this adjustment, adjustment with set state is difficult.
Therefore replace it every Assy when replacing the pulse module.

Measuring Waveform of Pulse Module Timing Adjustment

Timing adjustment of the pulse module control signal adjusts with the sustain pulse of eighth pulse (X DRIVE) and the ninth pulse (Y DRIVE) from the back of 6SF.

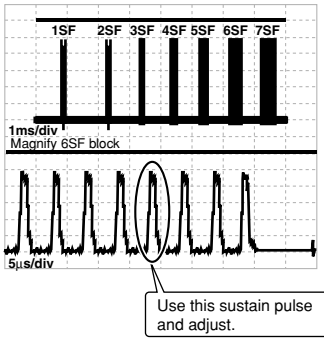
● Measuring point of waveform

Y DRIVE SUSOUT waveform



CH1 : Y SUSOUT Under (K2203), 50V/div
CH2 : Y SUSOUT Upper (K2212), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

X DRIVE SUSOUT waveform



CH1 : X SUSOUT Under (K3106), 50V/div
CH2 : X SUSOUT Upper (K3105), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

- Perform adjustment of waveform with a black mask screen.
- It is easy to adjust when turned field AB offset to OFF (RS-232C command: OCN) in adjustment.

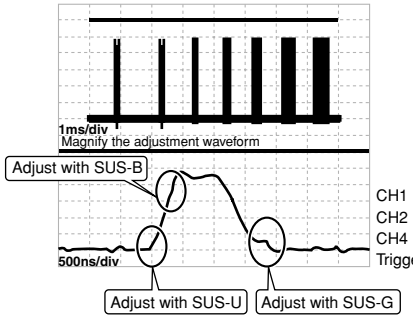
When took waveform be each drive Assy unit, measure it at the fourth sustain pulse from the back except for a large width sustain pulse.
Therefore, when measured both waveform of the X and Y drives together, it becomes the sustain pulse of 8 and 9 pulses from the back.

Note:
- Sampling rate of oscilloscope sets it more than 500MS/s in order to perform ns order adjustment.
- Collecting calibration of probe before adjustment by all means.

- Connect GND of probe measuring waveform to SUSGND terminal by all means.
- Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

● Waveform coarse adjustment

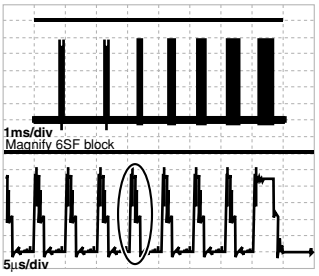
Measure the SUSOUT waveform



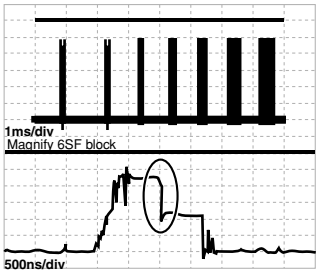
CH1 : Y SUSOUT Under (K2203), 50V/div
CH2 : Y SUSOUT Upper (K2212), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

When there is a gap with waveform of CH1 / CH2 of the part which enclosed in the following circle, adjust required VR to overlap the waveform.

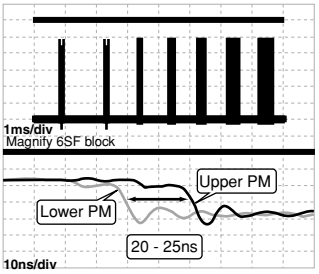
● SUS-D Adjustment (Y DRIVE)



Magnification



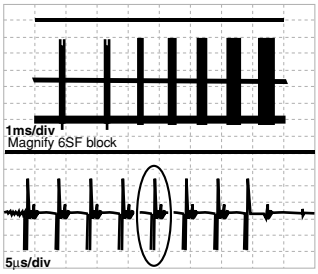
Magnification



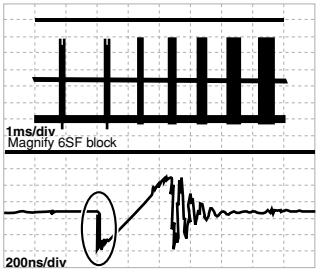
CH1 : Y SUS-D Under (K2225), 50V/div
CH2 : Y SUS-D Upper (K2207), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

Caution:
Not absolutely mistaking upper and lower of waveform.

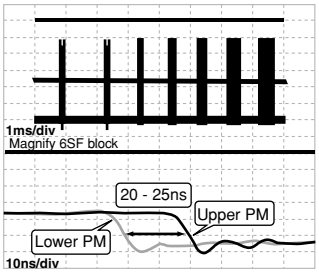
● SUS-U Adjustment (Y DRIVE)



Magnification



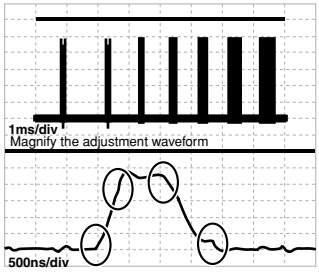
Magnification



CH1 : Y SUS-U Under (K2224), 50V/div
CH2 : Y SUS-U Upper (K2220), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

● Waveform Confirmation in Adjustment completion

Measure the SUSOUT waveform



CH1 : Y SUSOUT Under (K2203), 50V/div
CH2 : Y SUSOUT Upper (K2212), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

Confirm it to waveform of CH1 / CH2 of the part which enclosed in the following circle whether there is not a large gap.
(A gap of the quantity that shifts 20nS and adjusted remains.)

When adjust in the power supply ON state, change so that the quantity of gap that adjusted by temperature-rise of the pulse module becomes small.
Therefore, perform high power OFF (RS-232C command: DRF) except measurement time of waveform when adjusts, and adjustment error by temperature-rise does not occur.

■ SUS-B Ground Timing Adjustment

It is necessary to readjust this adjustment when replaced the X or Y DRIVE Assy and the pulse module.

- **Measurement point and method**

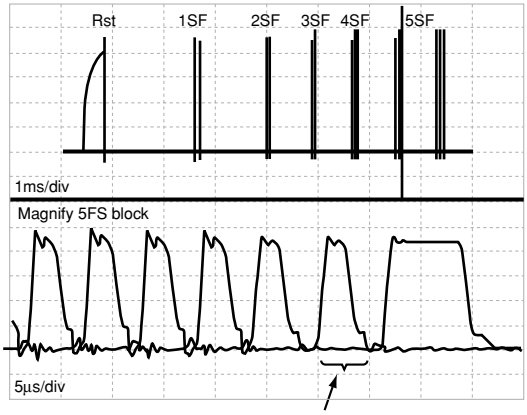
Measurement point of waveform of X and Y DRIVE Assy in timing adjustment is test pin of SUSOUT of the pulse module of bottom of the main unit.
X DRIVE Assy : K3106 Y DRIVE Assy : K2203
Measurement screen : Black mask (PC 60Hz)

The measurement is easy to perform when turns field AB alternation to OFF. (RS-232C command: OCN)

Measure a sustain pulse of the fifth pulse (X DRIVE) and the fifth pulse (Y DRIVE) from the back of the fourth FS, and adjust. In the start section of this sustain pulse, waveform has inflection point with the timing when SUS-B becomes ON. Adjust so that the voltage of this inflection point is the nearest to 140V and do not become less than 140V.
Adjustment parameter
X DRIVE: XSUSB (RS-232C command : XSB)
Y DRIVE: YSUSB (RS-232C command : YSB)

Note:
• Connect GND of probe measuring waveform to SUSGND terminal by all means.
• Precise waveform is not displayed, and an adjustment gap may occur that does not collect GND properly.

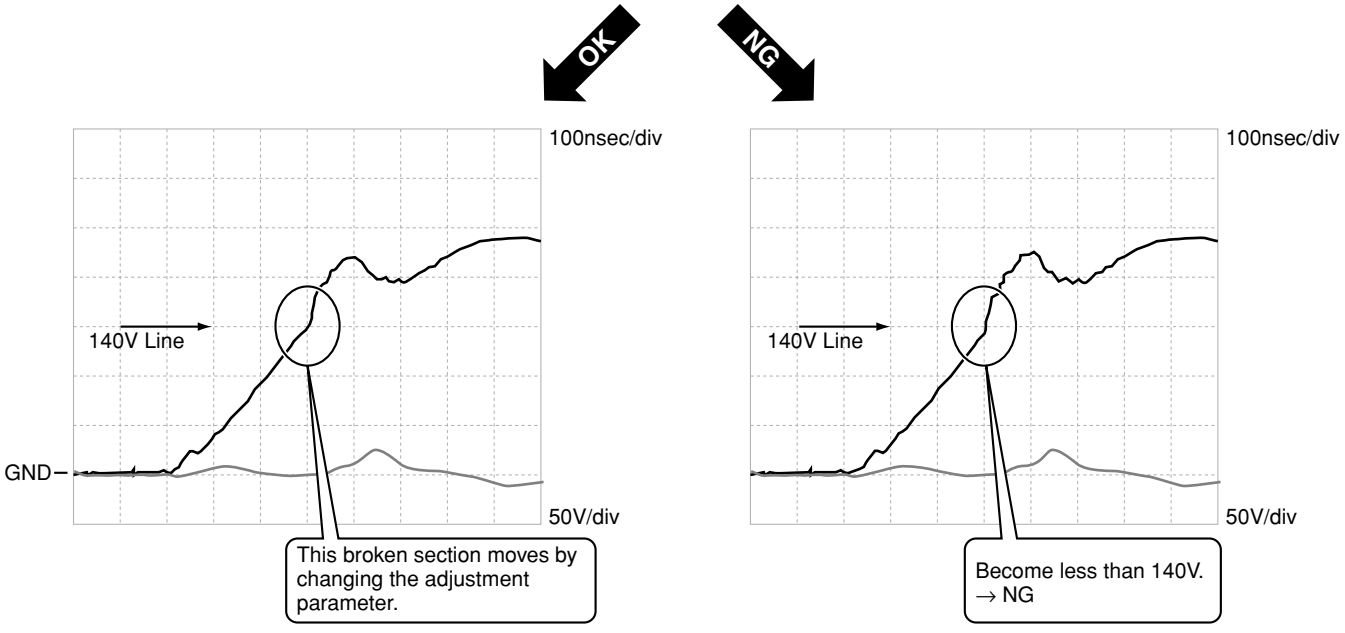
- **Waveform in the measurement**



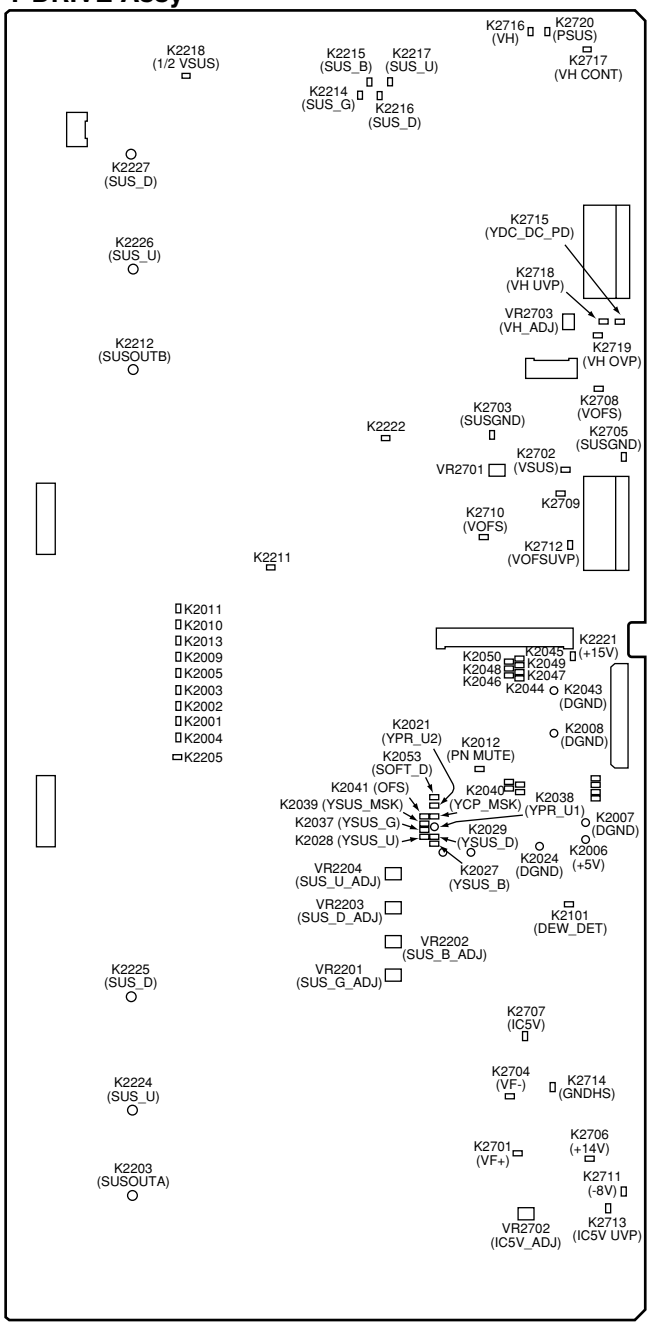
CH1 : Y SUSOUT (K2203), 50V/div
CH2 : X SUSOUT (K3106), 50V/div
CH4 : YPR-U1 (K2038)- Trigger, 5V/div
Trigger : 2msec delay

Measure a waveform of this section and adjust.

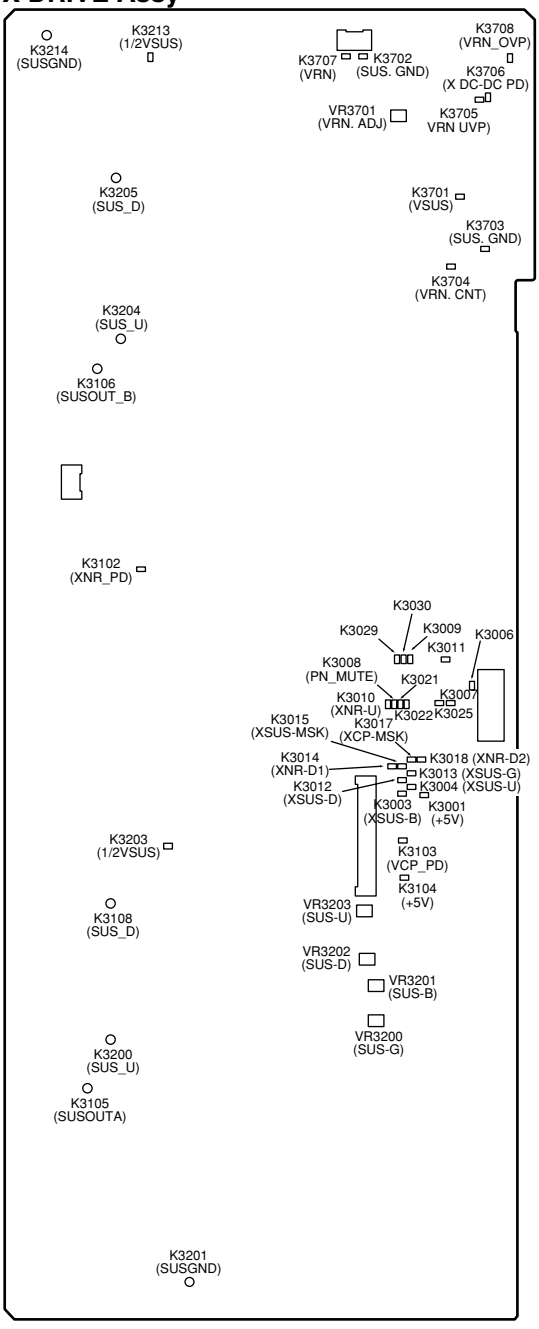
Magnify the fourth pulse sustain pulse (XSUSOUT waveform) from the back of the above waveform.



Y DRIVE Assy



X DRIVE Assy



Adjusting Points

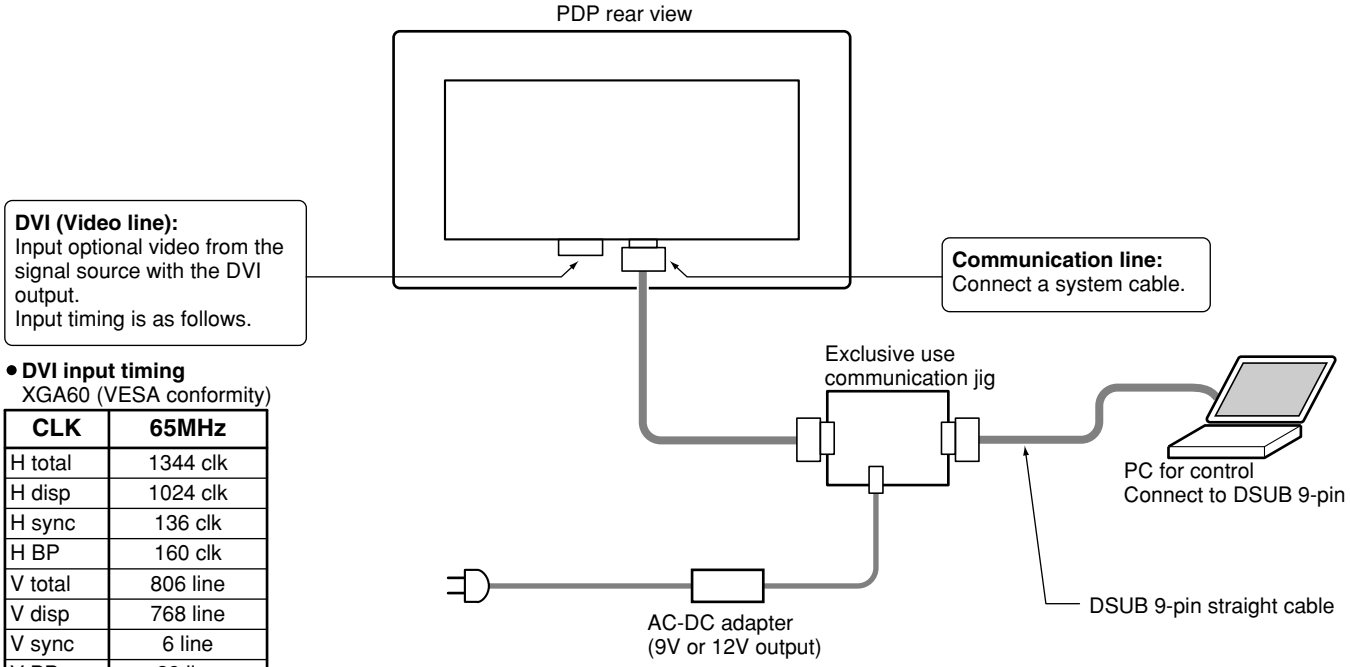
6.4 COMMAND

6.4.1 RS-232C Command

As for PDP-433P system, the 232C control of the panel control item is possible by a single state.
However, the following exclusive use communication jig is necessary.

* Be careful so that can not use a DSUB 9-pin in the rear panel of the media receiver.

■ Connection


PDP rear view
DVI (Video line):
Input optional video from the signal source with the DVI output.
Input timing is as follows.
Communication line:
Connect a system cable.
Exclusive use communication jig
PC for control
Connect to DSUB 9-pin
DSUB 9-pin straight cable
AC-DC adapter
(9V or 12V output)

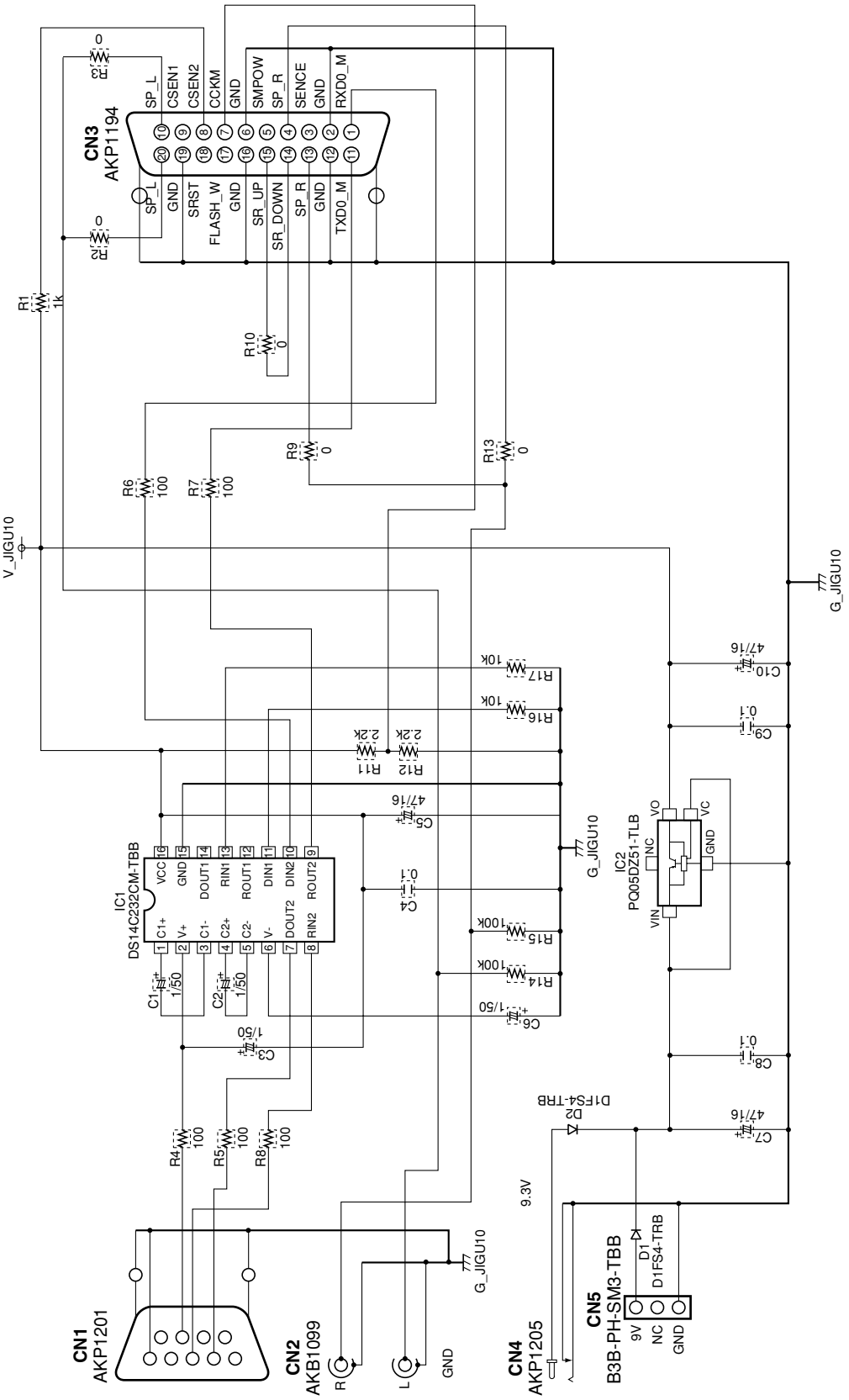
• **DVI input timing**
XGA60 (VESA conformity)

CLK	65MHz
H total	1344 clk
H disp	1024 clk
H sync	136 clk
H BP	160 clk
V total	806 line
V disp	768 line
V sync	6 line
V BP	29 line
fH	48.363 kHz
fV	60.004 Hz

■ Communication baudrate

38400 bps is fixed.

Jig Schematic Diagram



RS-232C Command

Command	Name	Function	Direct Validity	UP/DOWN Validity	Lower Limit	Upper Limit
AB0	ABL REFERENCE MODE	Set the ABL to reference value				
AB1	ABL OFFSET MODE 1	Set the ABL to offset value 1				
AB2	ABL OFFSET MODE 2	Set the ABL to offset value 2				
AB3	ABL OFFSET MODE 3	Set the ABL to offset value 3				
ABL	ABL ADJUST	Adjustment of electric power upper limit	O	O	000	255
AMN	AUDIO MUTE OFF	Mute off request of speaker volume				
AMY	AUDIO MUTE ON	Mute request of speaker volume				
DRF	DRIVE OFF	Drive OFF				
DRN	DRIVE ON	Drive ON				
DW0	DOWN 0	Down the adjustment value with 10				
DWF	DOWN FULL	Minimize the adjustment value				
DWn	DOWN n	Down the adjustment value with n				
EWN	EEPROM WRITE NO	Complete the plug & play EEPROM writing mode				
EWY	EEPROM WRITE YES	Start the plug & play EEPROM writing mode				
F50	FREE RUN 50VIDEO	Display the mask screen with 50Hz (video) sequence				
F60	FREE RUN 60VIDEO	Display the mask screen with 60Hz (video) sequence				
F61	FREE RUN 60PC	Display the mask screen with 60Hz (PC) sequence				
F70	FREE RUN 70PC	Display the mask screen with 70Hz (PC) sequence				
GAJ	GET ADJUST	Acquire the various adjustment value of the display				
GPW	GET PANEL W/B	Acquire the W/B adjustment value of the panel				
GS1	GET STATUS 1	Acquire the version information				
HMS	HOUR METER SET	Set hour meter to optional time				
M00	MASK 00	Mask mode OFF				
M01	MASK 01	Pattern 1 (Lamp)				
M02	MASK 02	Pattern 2 (Color bar)				
M03	MASK 03	Pattern 3 (Slanting line)				
M04	MASK 04	Pattern 4 (W/B measurement)				
M05	MASK 05	Pattern 5 (W/B adjustment)				
M06	MASK 06	Pattern 6 (W/B peak measurement)				
M07	MASK 07	Pattern 7 (Peak measurement)				
M08	MASK 08	Pattern 8 (Reservation)				
M09	MASK 09	Pattern 9 (SCAN IC protection test)				
M10	MASK 10	Pattern 10 (SCAN IC protection test)				
M11	MASK 11	Pattern 11 (reservation)				
M12	MASK 12	Pattern 12 (reservation)				
M13	MASK 13	Pattern 13 (reservation)				
M14	MASK 14	Pattern 14 (reservation)				
M51	MASK 51	Full mask (white)				
M52	MASK 52	Full mask (cyan 274)				
M53	MASK 53	Full mask (magenta 1023)				
M54	MASK 54	Full mask (flesh color)				
M55	MASK 55	Full mask (cyan 1023)				
M56	MASK 56	Full mask (light purple)				
M57	MASK 57	Full mask (sky blue)				
M58	MASK 58	Full mask (red)				
M59	MASK 59	Full mask (green)				
M60	MASK 60	Full mask (blue)				
M61	MASK 61	Full mask (black)				
M62	MASK 62	Full mask (red 779)				
M63	MASK 63	Full mask (cyan 218)				
M64	MASK 64	Full mask (cyan 444)				
M65	MASK 65	Full mask (flesh color 43)				
M66	MASK 66	Full mask (red 620)				
M67	MASK 67	Full mask (magenta 98)				
M68	MASK 68	Full mask (sky blue 1_43)				
M69	MASK 69	Full mask (sky blue 2_43)				
M70	MASK 70	Full mask (light purple 43)				

Command	Name	Function	Direct Validity	UP/DOWN Validity	Lower Limit	Upper Limit
M71	MASK 71	Full mask (yellow)				
M72	MASK 72	Full mask (blue 916)				
M73	MASK 73	Full mask (reservation)				
M74	MASK 74	Full mask (reservation)				
MMN	MIRROR MODE NO	Mirror mode OFF (normal display)				
MMX	MIRROR MODE X	Right and left reversing display				
MMY	MIRROR MODE Y	Top and bottom reversing display				
MMZ	MIRROR MODE XY	Top and bottom right and left reversing display				
MTN	PANEL MUTE NO	Release panel mute				
MTY	PANEL MUTE YES	Panel mute				
NMN	NEGATIVE MODE NO	Negative positive inversion mode OFF				
NMY	NEGATIVE MODE YES	Negative positive inversion mode ON				
PBH	PANEL BLUE HIGH	BLUE HIGH LIGHT adjustment	O	O	000	255
PBL	PANEL BLUE LOW	BLUE LOW LIGHT adjustment	O	O	000	999
PGH	PANEL GREEN HIGH	GREEN HIGH LIGHT adjustment	O	O	000	255
PGL	PANEL GREEN LOW	GREEN LOW LIGHT adjustment	O	O	000	999
PHN	PANEL HIGHT-LIGHT NO	Release the W/B highlight maximum mode of the panel				
PHY	PANEL HIGHT-LIGHT YES	Set the W/B highlight of the panel to maximum				
PLN	BRIGHT ENHANCE NO	Center brightness correction enhance OFF				
PLY	BRIGHT ENHANCE YES	Center brightness correction enhance ON				
PMS	PULSE METER SET	Optional setting of the pulse meter				
POF	POWER OFF	Standby request				
PON	POWER ON	Power ON request				
PRH	PANEL RED HIGH	RED HIGH LIGHT adjustment	O	O	000	255
PRL	PANEL RED LOW	RED LOW LIGHT adjustment	O	O	000	999
PCN	PC MODE NO	At the 60Hz input: VIDEO sequence selection				
PCY	PC MODE YES	At the 60Hz input: PC sequence selection				
PT0	PANEL COLOR TEMP 0	Set each temperature mode to 0 (REF)				
PT1	PANEL COLOR TEMP 1	Set each temperature mode to 1 (OFS1)				
PT2	PANEL COLOR TEMP 2	Set each temperature mode to 2 (OFS2)				
UP0	UP 0	Maximize the adjustment value				
UPF	UP FULL	Maximize the adjustment value				
UPn	UP n	Rise the adjustment value with n				
VOF	VOFFSET ADJUST	Vofs adjustment	O	O	000	255
VOL	VOLUME	Volume	O	O	000	060
VSU	VSUS ADJUST	Vsus adjustment	O	O	000	255
XSB	XSUS B	X-SUS-B pulse adjustment	O	O	000	015
XSG	XSUS G	X-SUS-G pulse adjustment	O	O	000	015
YSB	YSUS B	Y-SUS-B pulse adjustment	O	O	000	015
YSG	YSUS G	Y-SUS-G pulse adjustment	O	O	000	015

6.4.2 GET Command

● Command Description

Command	Function
GAJ	Output data of an electronic VR adjustment value and a drive system adjustment value
GPW	Output data to be related to white balance adjustment of the panel
GS1	Output data such as version information, hour meter and pulse meter

GAJ: Output data of an electron VR adjustment value and a drive system adjustment value

• Output it according to transmission order and size of the table below.

Order	Data Contents		Size	Remarks
1	Setting mode of electric power upper limit value		3 byte	AB* (*: 0 to 3)
2	Electric power upper limit value (ABL)	(Reference data)	3 byte	
3		(Offset data)	3 byte	(Note 1)
4	Vsus adjustment value	(Reference data)	3 byte	
5	Vofs adjustment value	(Reference data)	3 byte	
6	V-SUS-B adjustment value	(Reference data)	3 byte	
7	V-SUS-G adjustment value	(Reference data)	3 byte	
8	Y-SUS-B adjustment value	(Reference data)	3 byte	
9	Y-SUS-G adjustment value	(Reference data)	3 byte	

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.
(Note 2) : Checksum of 2 bytes is added at the end, but ignore it.

GPW (Get Panel White balance): Output data to be related to white balance adjustment of panel

• Output it according to transmission order and size of the table below.

Order	Data Contents		Size	Remarks
1	Panel color temperature mode		3 byte	PT* (*: 0 to 3)
2	Gain of W/B adjustment value Red	(Reference data)	3 byte	
3		(Offset data)	3 byte	(Note 1)
4	Gain of W/B adjustment value Green	(Reference data)	3 byte	
5		(Offset data)	3 byte	(Note 1)
6	Gain of W/B adjustment value Blue	(Reference data)	3 byte	
7		(Offset data)	3 byte	(Note 1)
8	Offset of W/B adjustment value Red	(Reference data)	3 byte	
9		(Offset data)	3 byte	(Note 1)
10	Offset of W/B adjustment value Green	(Reference data)	3 byte	
11		(Offset data)	3 byte	(Note 1)
12	Offset of W/B adjustment value Blue	(Reference data)	3 byte	
13		(Offset data)	3 byte	(Note 1)

(Note 1) : When performed in reference mode selection, offset data outputs the same value as the reference data.
(Note 2) : Checksum of 2 bytes is added at the end, but ignore it.

GS1: Output data such as version information, hour meter and pulse meter

• Output it according to transmission order and size of the table below.

Order	Data Contents	Size	Remarks
1	Display information	3 byte	See below
2	Module microcomputer model number	4 byte	5691 or F691
3	Module microcomputer version	3 byte	
4	Panel microcomputer version	3 byte	
5	Panel /FLASH ROM version	3 byte	
6	Hour meter (hour)	5 byte	Unit: H (time)
7	Pulse meter	7 byte	Unit: 0.01G (10,000,000)
8	Main microcomputer model number	4 byte	5692 or F692
9	Main microcomputer version	3 byte	
10	Wide microcomputer version	3 byte	
11	Wide /FLASH ROM version	3 byte	

(Note) : Checksum of 2 bytes is added at the end, but ignore it.

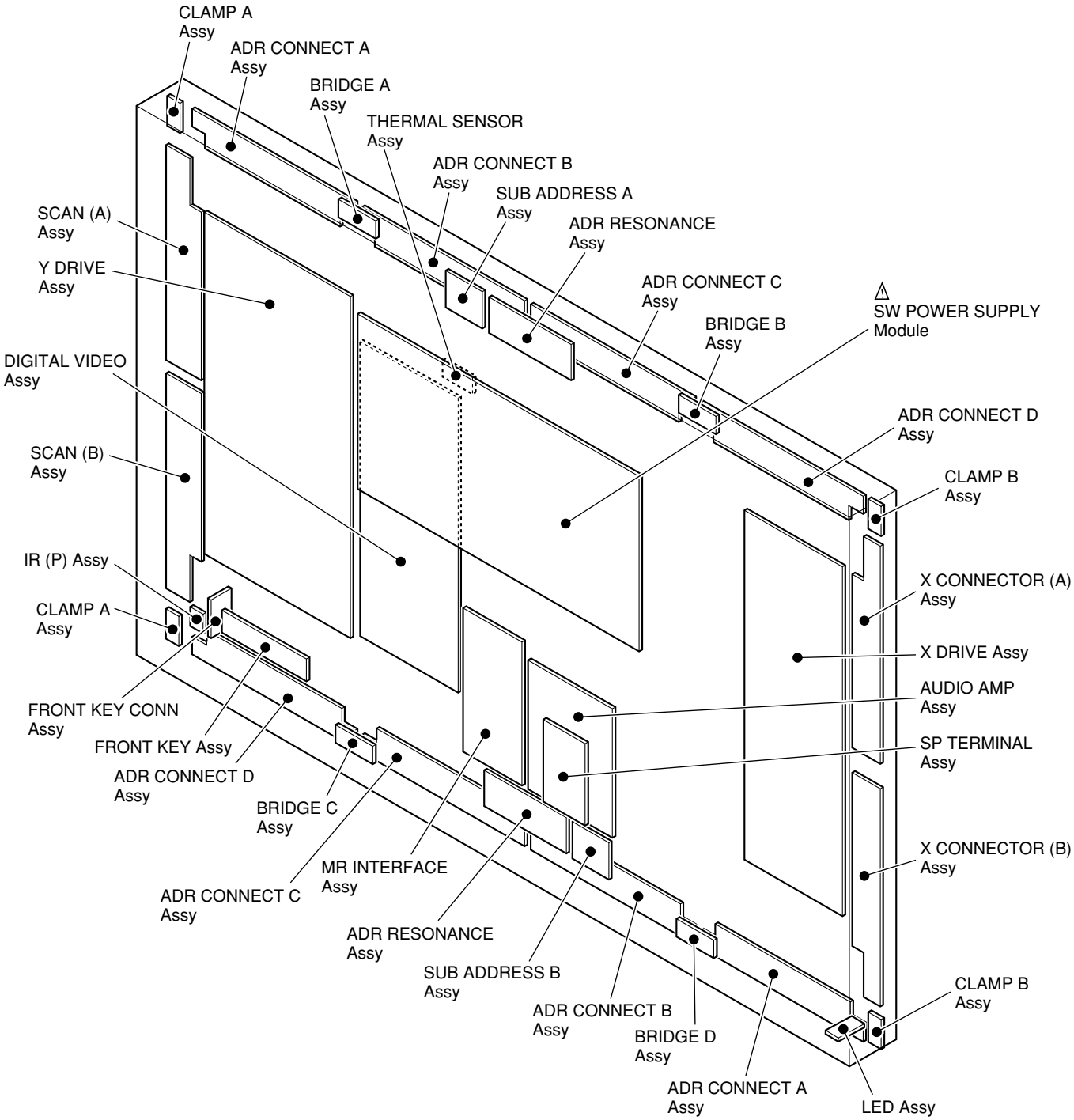
■ Display Information

Data	Model
MX5	PDP-503MX (initial value)
MX4	PDP-433MX
MD5	Module 50 inches
MD4	Module 43 inches
HD5	PDP-503HD
HD4	PDP-433HD

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 PCB LOCATION



● Rear View

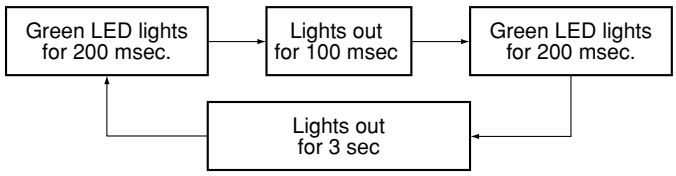
7.1.2 SHUT DOWN/POWER DOWN DIAGNOSIS BY LED DISPLAY

When internal circuit abnormality and other operation abnormality occurred from this unit, self-diagnose display function by STANDBY/ON (LED) indicator is loaded.
Each NG point by LED blinking and a PD (power down) point are as follows.

● Shut Down

• Operations : When a microcomputer detected abnormality, turn the power supply to OFF.
• LED display : Green blinks

Examples: LED blinks in the DIGITAL-IIC communication NG



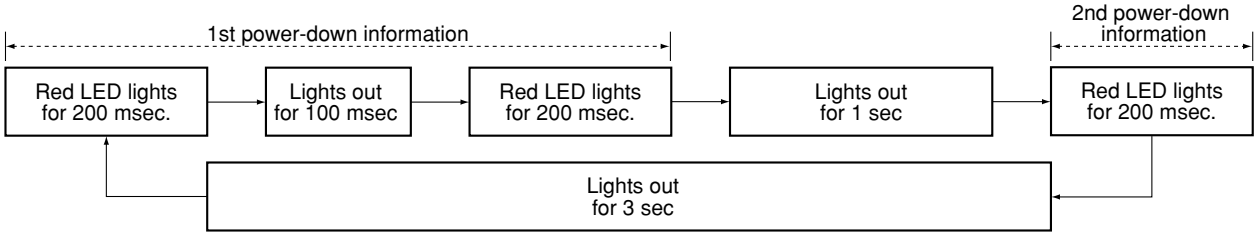
Number of blinks	Name
1	Panel Microcomputer NG
2	DIGITAL-IIC communication NG
3	Dewdrop abnormality
4	Temperature abnormality

How to release the shut down state
When turn the power supply ON by remote control units, release from the shut down state, and turn the power supply ON.
(It is not necessary to turn the AC power OFF.)

● Power Down

• Operations : When this unit becomes the dangerous state, turn the power supply OFF with the protection circuit.
• LED display : Red blinks
* When protection circuit more than two places almost worked simultaneously, display LED in order to 1st - 2nd.

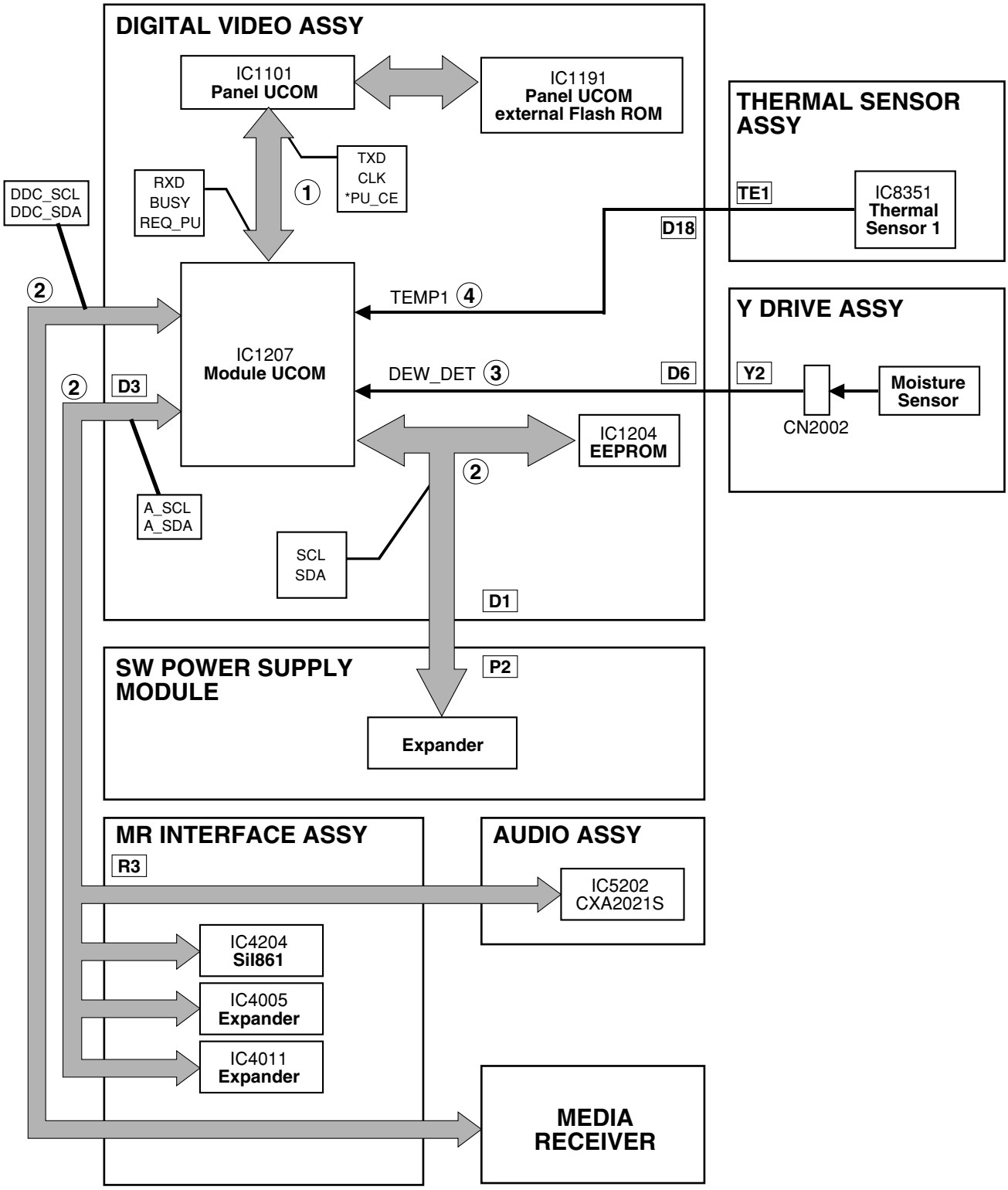
Examples: LED blinks in the 1st power down = Y-DC/DC CONVERTER, 2nd power down = Y-DRIVE


1st power-down information
2nd power-down information
Red LED lights for 200 msec.
Lights out for 100 msec
Red LED lights for 200 msec.
Lights out for 1 sec
Red LED lights for 200 msec.
Lights out for 3 sec

Number of blinks	Name
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	Address junction
7	Address resonance
8	DIGITAL-DC/DC CONVERTER

How to release the power down state
AC power OFF
↓
Wait for PD LED in the power supply module disappearing (for around 30 seconds).
↓
Afterwards, wait moreover for five seconds.
↓
Return by AC power ON.
* After power down release, this unit rises up in the standby state.

● **Block Diagram of Shut Down Signal System**



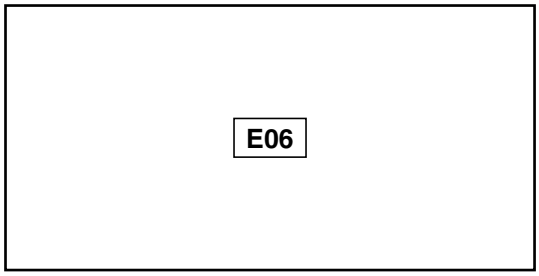
Note: ① - ④ show LED flashing number of times when shut down occurred in this route.

● Shut down diagnosis

① Panel microcomputer NG

When a module microcomputer failed in communication with a panel microcomputer, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.

Abnormality to expect
Open / Short of communication line in the Assy



② DIGITAL-IIC communication NG

When a module microcomputer failed in communication with outside EEPROM or EXPANDER, this NG occurs.
Shut down after OSD display for 30 seconds from the NG detection.
* However, this communication NG may occur in the standby state.

Abnormality to expect
- Open / Short of communication line in the DIGITAL VIDEO, MR INTERFACE and AUDIO Assys
- Breaking of wire of the following points is thought about.
  DIGITAL VIDEO Assy (D1) ↔ SW POWER SUPPLY Module (P2)
  DIGITAL VIDEO Assy (D3) ↔ MR INTERFACE Assy (R3)
  MR INTERFACE Assy (R23) ↔ AUDIO Assy (A24)
  System Cable

③ Dew drop detection

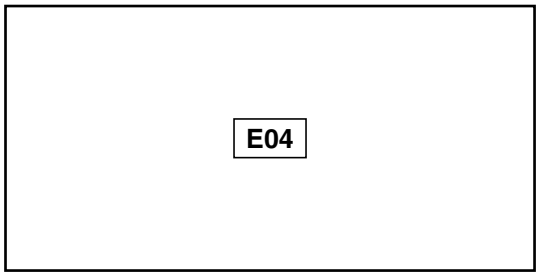
When it becomes the dew drop state in this unit, this NG occurs.
After the dew drop detection, shut down immediately.

Abnormality to expect for dew drop
Disconnect a connector CN2002 between Dew drop sensor and Y DRIVE Assy.

④ Temperature abnormality

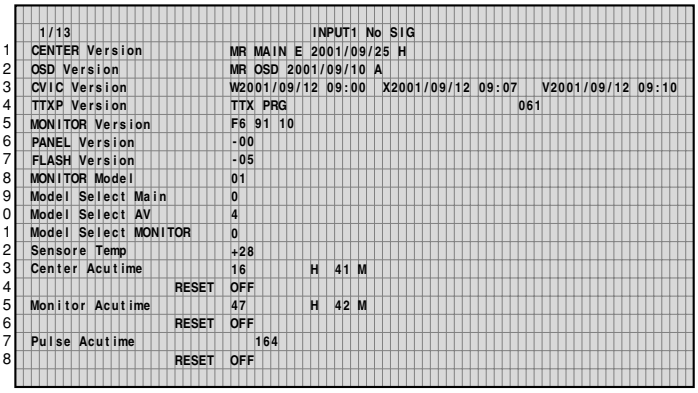
When temperature of this unit became abnormally high, this NG occurs.
Shut down after OSD display from the NG detection for 30 seconds.
Note: When temperature fell down during indication, return to the normal operation.

Abnormality to expect when it occurs in the environment that is not high-temperature
- Disconnect a connector between DIGITAL VIDEO Assy (D18) and temperature sensor 1 (TE1).

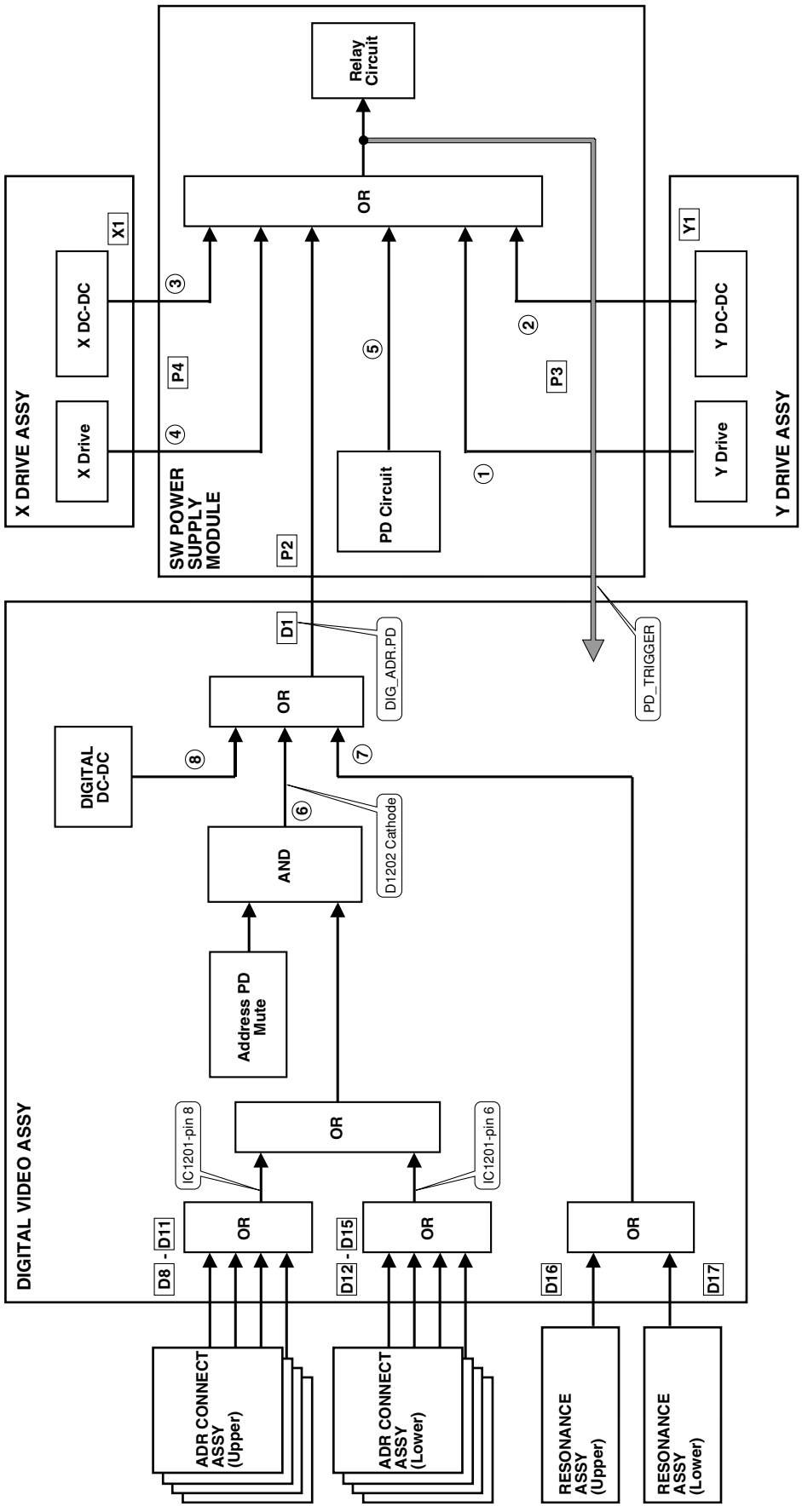


Reference

Shut down temperature of each temperature sensor
Sensor Temp ≧ 78


1/13 INPUT1 No SIG
1 CENTER Version MR MAIN E 2001/09/25 H
2 OSD Version MR OSD 2001/09/10 A
3 CVIC Version W2001/09/12 09:00 X2001/09/12 09:07 V2001/09/12 09:10
4 TTXP Version TTX PRG 061
5 MONITOR Version F6 91 10
6 PANEL Version -00
7 FLASH Version -05
8 MONITOR Model 01
9 Model Select Main 0
10 Model Select AV 4
11 Model Select MONITOR 0
12 Sensore Temp +28
13 Center Acutime 16 H 41 M
14 RESET OFF
15 Monitor Acutime 47 H 42 M
16 RESET OFF
17 Pulse Acutime 164
18 RESET OFF

● **Block Diagram of Power Down Signal System**



Note: ① - ⑧ show LED flashing number of times when power down occurred in this route.

● **Kind and function of the various protection circuit (P.D. circuit)**

Assy Name	Red LED Number of Blinks	Kind of P.D. Circuit	Function	Remarks
Y DRIVE Assy	1	VCP OCP	P.D. by VCP overcurrent	
	2	VOFS OVP	P.D. by VOFS overvoltage	
		VOFS UVP	P.D. by VOFS undervoltage (= overcurrent)	
		VH OVP	P.D. by VH overvoltage	
		VH UVP	P.D. by VH undervoltage (= overcurrent)	
		IC5V UVP	P.D. by IC5V undervoltage (= overcurrent)	
X DRIVE Assy	3	VRN OVP	P.D. by VRN overvoltage	
		VRN UVP	P.D. by VRN undervoltage (= overcurrent)	
	4	VCP OCP	P.D. by VCP overcurrent	
		RESET OCP	P.D. by reset circuit overcurrent	
SW POWER SUPPLY Module	5	VSUS OVP	P.D. by VSUS overvoltage	
		VSUS UVP	P.D. by VSUS undervoltage (= overcurrent)	
		VADR OVP	P.D. by VADR overvoltage	
		VADR UVP	P.D. by VADR undervoltage (= overcurrent)	
		15V OVP	P.D. by 15V overvoltage	
		15V UVP	P.D. by 15V undervoltage (= overcurrent)	
		12V UVP	P.D. by 12V undervoltage (= overcurrent)	
		6.5V OVP	P.D. by 6.5V overvoltage	
		6.5V UVP	P.D. by 6.5V undervoltage (= overcurrent)	
		13.5V UVP	P.D. by 13.5V undervoltage (= overcurrent)	
		-9V UVP	P.D. by -9V undervoltage (= overcurrent)	
		+B OVP	P.D. by +B overvoltage	
		+B OCP	P.D. by +B overcurrent	
		AC200V P.D.	P.D. by AC200V apply	Note 1
			PFC module overheat protection	
			VSUS arc resistance overheat protection	
ADR CONNECT Assy	6	ADR.PD	P.D. by disconnecting the connector	
RESONANCE Assy	7	ADR.K.PD	P.D. by ICP open and TCP defective	
DIGITAL VIDEO Assy	8	5.0V OVP	P.D. by 5V overvoltage	
		5.0V UVP	P.D. by 5V undervoltage (= overcurrent)	
		3.3V OVP	P.D. by 3.3V overvoltage	
		3.3V UVP	P.D. by 3.3V undervoltage (= overcurrent)	
		2.5V OVP	P.D. by 2.5V overvoltage	
		2.5V UVP	P.D. by 2.5V undervoltage (= overcurrent)	

Reference
OVP : **O**ver **V**oltage **P**rotect
UVP : **U**nder **V**oltage **P**rotect
OCP : **O**ver **C**urrent **P**rotect

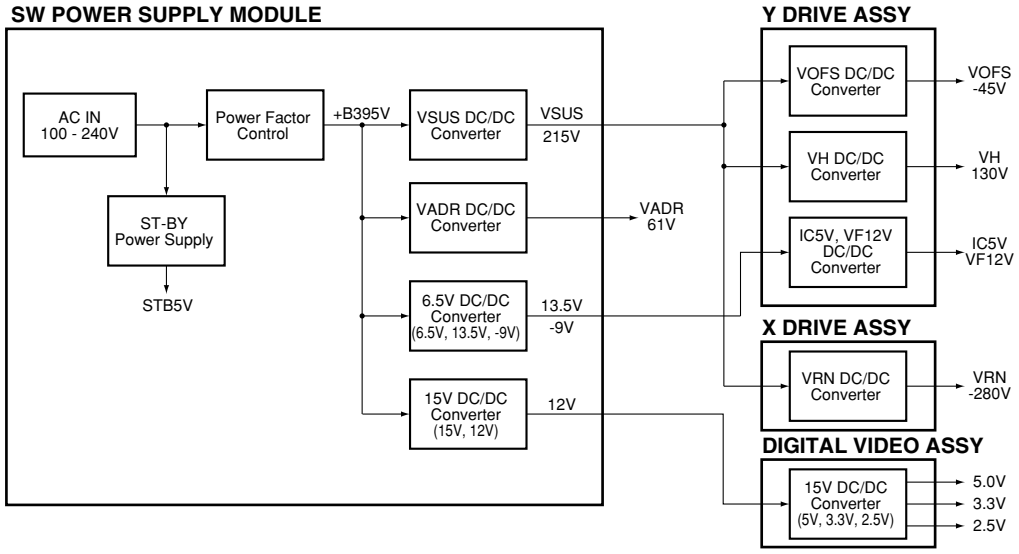
Note 1: AC200V P.D. is not applicable to the PDP-433PE and PDP-433PU models.

● Diagnosis of the error point in the various protection circuit (P.D. circuit) operation (Red LED blinks)

Number of Blinks	P.D. Point in Operation	Error Pont	Possible Part of Error	Circuit State	Operation P.D. Circuit	Diagnosis Condition
1	Y DRIVE	Y DRIVE Assy	IC2206, IC2214 (Pulse module), IC2203, IC2204, IC2212, IC2213, IC2213, IC2217, R2209	K2211 Lo	VCP OCP	
2	Y DC DC	VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2702, IC2709, IC2715	K2712 Lo	VOFS OVP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2701, IC2702, IC2709, IC2715	K2709 Lo	VOFS UVP	Drive section (control signal, output elements etc.) in normal operation
			Q2211, Q2212, R2277, IC2208, IC2210			VOFS D/D CONV. BLOCK in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2712, IC2716	K2719 Lo	VH OVP	
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2711, IC2712, IC2716	K2718 Lo	VH UVP	Drive section (control signal, output elements etc.) in normal operation
		SCAN (A), (B) Assy	SCAN IC			VH D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
		SCAN (A), (B) Assy	SCAN IC	K2713 Lo	IC5V UVP	IC5V D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
3	X DC DC	VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3702, IC3712	K3708 Lo	VRN OVP	
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3701, IC3702, IC3712	K3705 Lo	VRN UVP	Drive section (control signal, output elements etc.) in normal operation
		X DRIVE Assy	Q3122			VRN D/D CONV. BLOCK in normal operation
4	X DRIVE	X DRIVE Assy	IC3200, IC3201 (pulse module), IC3103, IC3104, IC3106, IC3107, IC3110, IC3113, R3109	K3103 Lo	VCP OCP	
			Q3122	K3102 Lo	VRN OCP	
5	PS	X DRIVE Assy	IC3200, IC3201 (Pulse module)			When P4 connector disconnected, P.D. does not occur
		Y DRIVE Assy	IC2206, IC2214 (Pulse module)			When P3 connector disconnected, P.D. does not occur
		MX AUDIO Assy	IC8601 (Audio IC)			When P6 connector disconnected, P.D. does not occur
		ADDRESS CONNECT A - D Assy, RESONANCE Assy, D/D CONV. BLOCK (DIGITAL VIDEO Assy)				When pin 5 of P2 connector disconnected, P.D. does not occur
		SW POWER SUPPLY Module	SW POWER SUPPLY Module			When the voltage is not output even if P4, P3 and P6 connectors disconnected
6	ADR	ADDRESS CONNECT A~D Assy	Disconnect D8 - D15 connectors		ADR. PD	
7	ADR K	RESONANCE Assy	TCP damage of IC6704 (ICP), disconnect D16 and D17 connectors, panel microcomputer is defective, outside Flash ROM of the panel microcomputer is defective.		ADR. K. PD	
8	DIGITAL DC DC	D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1901 Lo	5.0V OVP	
				K1902 Lo	5.0V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1903 Lo	3.3V OVP	
				K1904 Lo	3.3V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1905 Lo	2.5V OVP	
				K1906 Lo	2.5V UVP	

Note: About PS PD
The condition that Red LED blinks five times (power supply PD)
1 When the internal protection circuit of SW POWER SUPPLY Module worked
2 When a microcomputer was not able to identify the PD point
↓
Being careful because the protection circuit of SW POWER SUPPLY Module cannot conclude that worked.

● Block diagram for Power supply section



● Supplementary information

1. Power on/off switch for the large-signal system (SW102)

Function: Only the power for the small-signal system (15V, 12V, 6.5V, 13.5V, and -9V) is on, and the power for the large-signal system (VSUS, VADR) is off.

Usage: Use when only an operational check for the small-signal system is required.

Supplementary information:
When this switch is to be used, the wires of pin 5 (DIG, ADR, and PD) of the P2 connector of the power-supply module should be disconnected to prevent the PD circuit from operating. To turn the power of the large-signal system off without using this switch, operation from an external PC through RS-232C commands "DRF" is basically required. In this case, the above procedure is not required, as the PD circuit is muted by software.

Method of power supply ON in the large signal system OFF state with RS-232C command

① Confirm that this unit is the standby state.
② Transmit RS-232C command "DRF."
③ Turn the power supply ON by remote control unit, side key or command "PON."

* When turn the power supply OFF once, return to setting of large signal system ON.
When turn the power supply ON in the large signal system OFF, transmit "DRF" command each time.

2. 200V AC power-down switch (SW101)

Function: While 200V AC voltage is applied, operation of the PD circuit is turned on and off (ON when the switch is set to 100V AC, and OFF when the switch is set to 200V AC).

Setting: For the PU model only, the switch is set to 100V, and for other models, it is set to 200V.

3. Temperature compensation of the VSUS voltage for the drive system

Function: Control the power supply voltage mentioned above according to temperature. (Temperature compensation works so that the voltage is lowered on the lower-temperature side, and is raised on the higher-temperature side.)

Purpose: To improve the yield by compensating the temperature characteristics of the panel.

Supplementary information:
For this model, temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage, and it is controlled by software.

4. When a fuse blows

- If a fuse blows, never turn the power on again only after replacing the fuse. (In most cases, the fuse itself did not have any problem. So as long as factors of overcurrent have not been removed, chances of destruction increase every time the power is turned on. In the worst case, about a dozen parts may be destroyed.)
- Principally, the whole power-supply module must be replaced.

5. Voltage adjustment of the panel drive

As this model employs the electronic VR system for the VSUS and VOFS voltages, and as the voltage-adjustment data are stored in the DIGITAL assembly, voltage adjustment of the panel drive is not necessary when the power-supply modules are changed. (For VADR, VH, and VRN, adjustments with semifixed VR controls are necessary.)

For this model, as the power-supply block has been developed and designed by an outside vendor, at the point you know which module is a cause of failure (through diagnosis described elsewhere in this manual), change the corresponding modules, and do not diagnose or repair the module.

Similarly, the switches and the semifixed VRs inside the power-supply module must not be adjusted without a special reason.

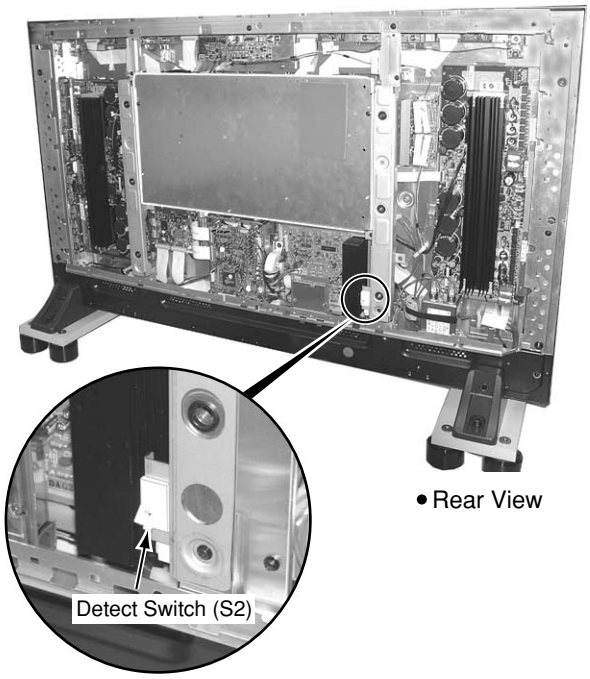
7.1.3 DISASSEMBLY

About detect switch

This unit adopt the "Rear Case opened ! detection" system.
Please work in service as follows by all means.

● Outline and caution

Perform video transmission from the media receiver to the plasma display with digital signal in the PDP-433HD series. Therefore adopt contents protection by HDCP for copyright protection.
Moreover establish the detect switch which is never turned on the power when "a rear case of plasma display was opened carelessly".
Detect switch does not detect at the power supply OFF and the remote control unit wait state. Please stick this detect switch with tape before turning on the power in inside diagnoses of the plasma display. And please remove it not to forget the tape which stuck after the repair.



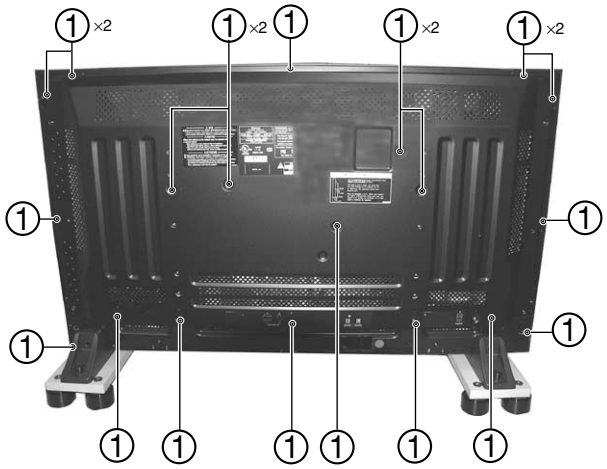
● Rear View

● When detect switch has worked by any chance

When detect switch works, LED of red blinks in succession by a 300msec period.
Press keys in order of "MENU" key, "ENTER" key and "POWER" key with the remote control unit after sticking the detect switch with tape or close the rear case beforehand.
This unit activates and it becomes the service factory mode screen. Afterwards, turn off the power with the remote control unit.
Perform the normal operation afterward.

SW Power Supply Module

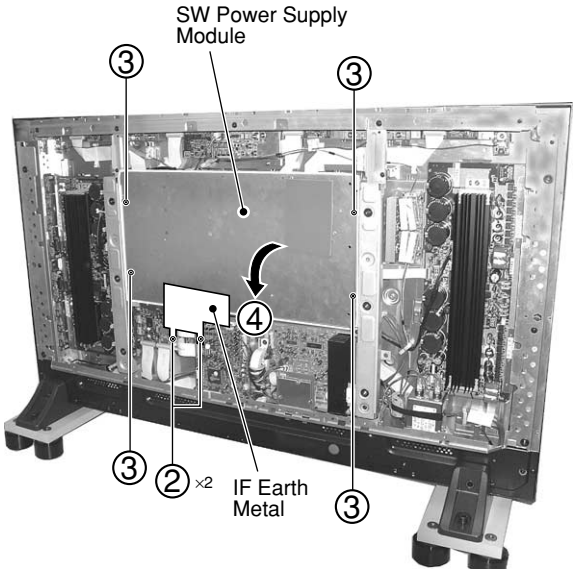
① Remove the Rear Case (P).(Screws × 19)



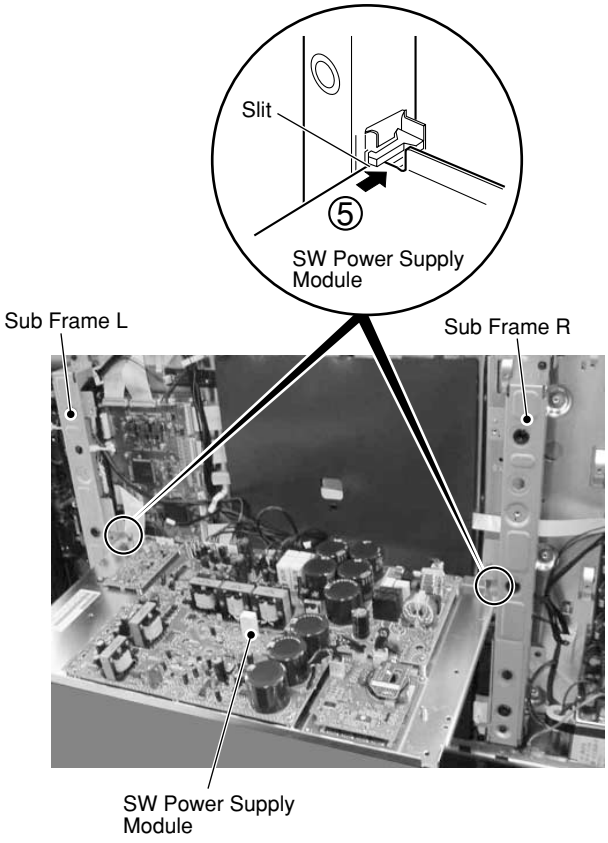
② Remove the IF Earth Metal.(Screws × 2)

③ Remove four screws.

④ Remove the SW Power Supply Module.



⑤ Insert the SW Power Supply Module into the slit of Sub Frame L and R.



Diagnosis

MR INTERFACE, AUDIO AMP SP TERMINAL and DIGITAL VIDEO Assys

① Remove the Rear Case (P). (Screws × 19)

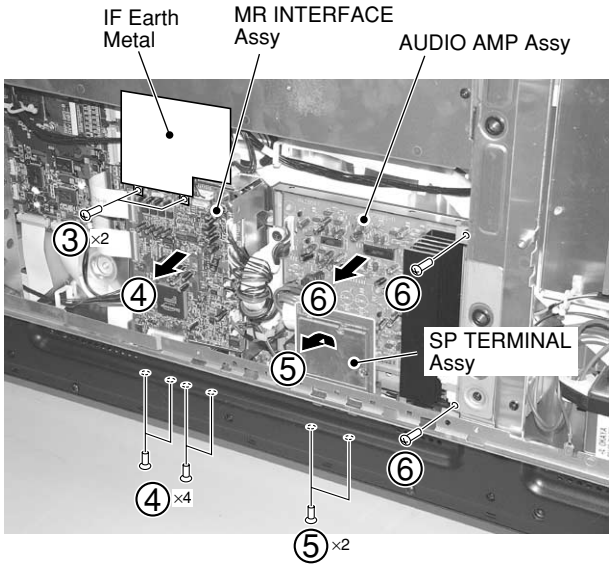
② Remove the SW Power Supply Module. (Connector, Screws × 4)

③ Remove the IF Earth Metal (Screws × 2)

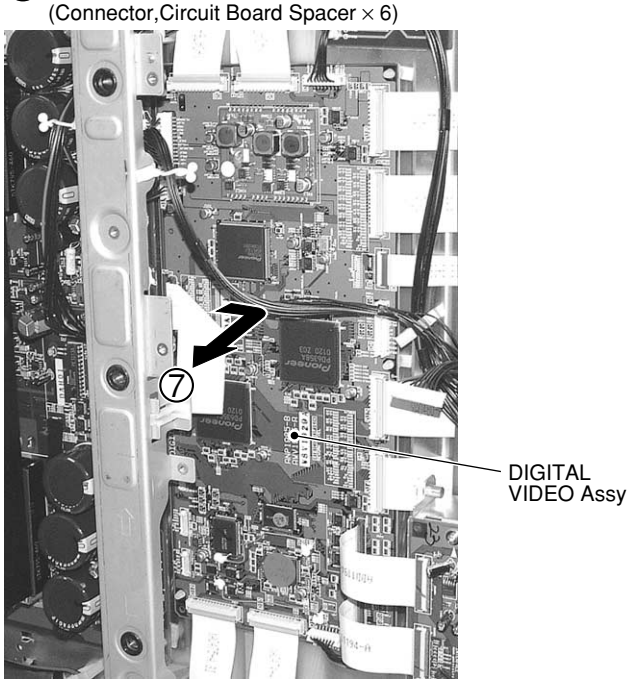
④ Remove the MR INTERFACE Assy (Connector, Screws × 4)

⑤ Remove the SP TERMINAL Assy (Connector, Screws × 2)

⑥ Remove the AUDIO AMP Assy (Connector, Screws × 2)

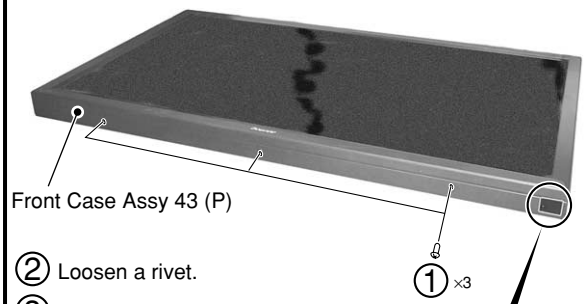


⑦ Remove the DIGITAL VIDEO Assy (Connector,Circuit Board Spacer × 6)



Y DRIVE, SCAN (A), (B) Assy

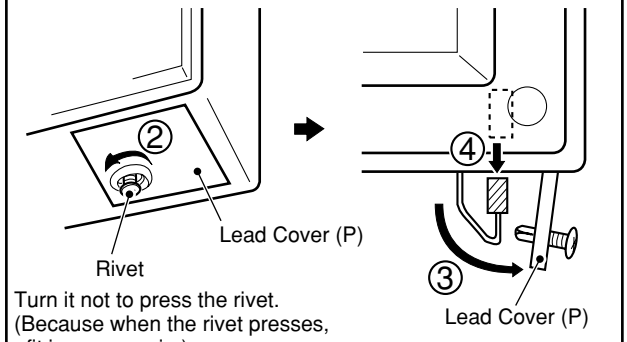
① Remove the three screws.



② Loosen a rivet.

③ Remove the Lead Cover (P).

④ Pull out a Flexible Cable.

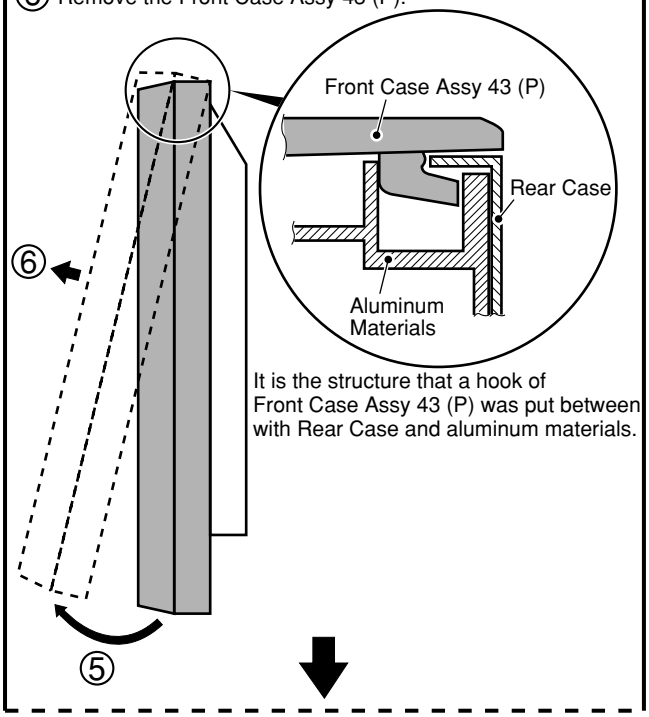


Turn it not to press the rivet.
(Because when the rivet presses, fit in once again.)

It is easy to remove when pull out the Lead Cover (P) with the rivet before completely removing the rivet.

⑤ Remove bottom by the fulcrum at the top of Front Case Assy 43 (P).

⑥ Remove the Front Case Assy 43 (P).



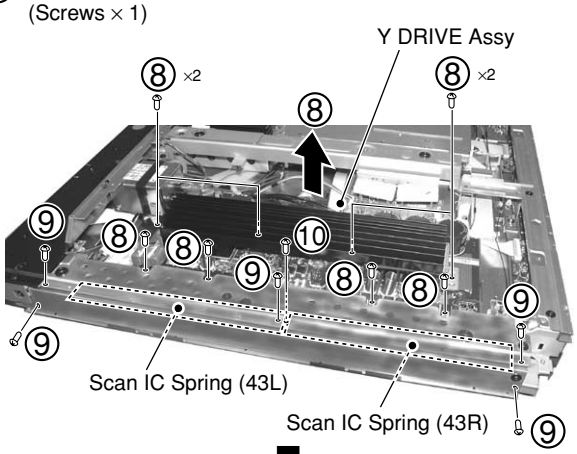
It is the structure that a hook of Front Case Assy 43 (P) was put between with Rear Case and aluminum materials.

⑦ Remove the Rear Case (P). (Screws × 19)

⑧ Remove the Y DRIVE Assy.
(Connector, PCB Spacer × 3, Screws × 8)

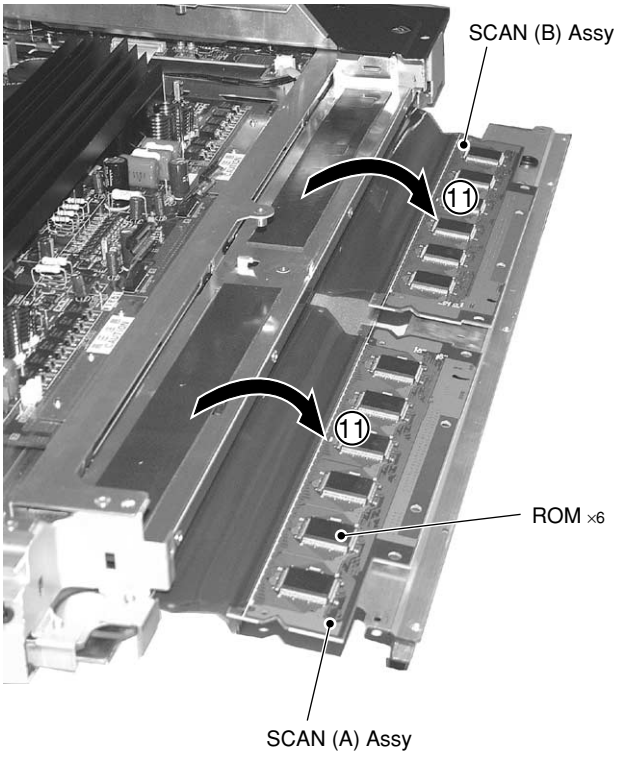
⑨ Remove the Front Chassis V. (Screws × 5)

⑩ Remove the Scan IC Spring (43L) and (43R).
(Screws × 1)



⑪ Reverse the SCAN (A) and SCAN (B) Assemblies.

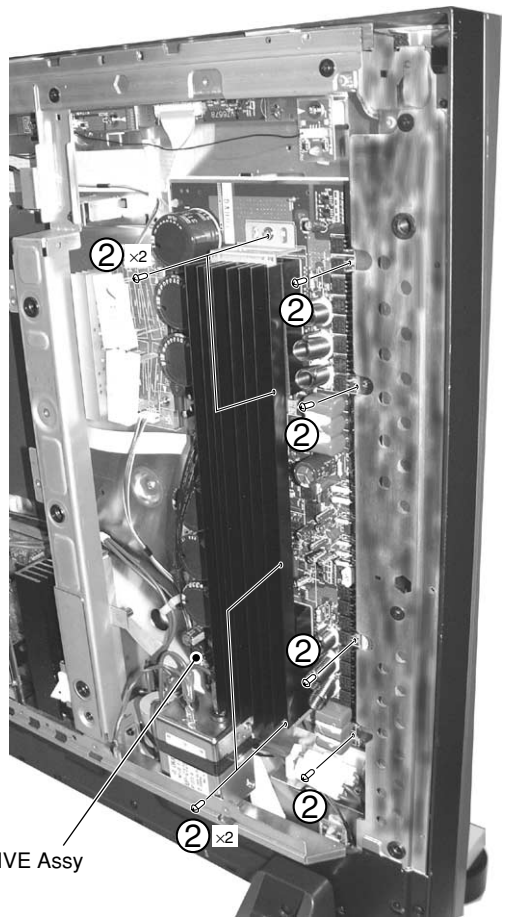
⑫ When it is necessary, exchange the ROM.



X DRIVE Assy

① Remove the Rear Case (P). (Screws × 19)

② Remove the X DRIVE Assy.
(Connector, PCB Spacer × 3, Screws × 8)



7.2 IC INFORMATION

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

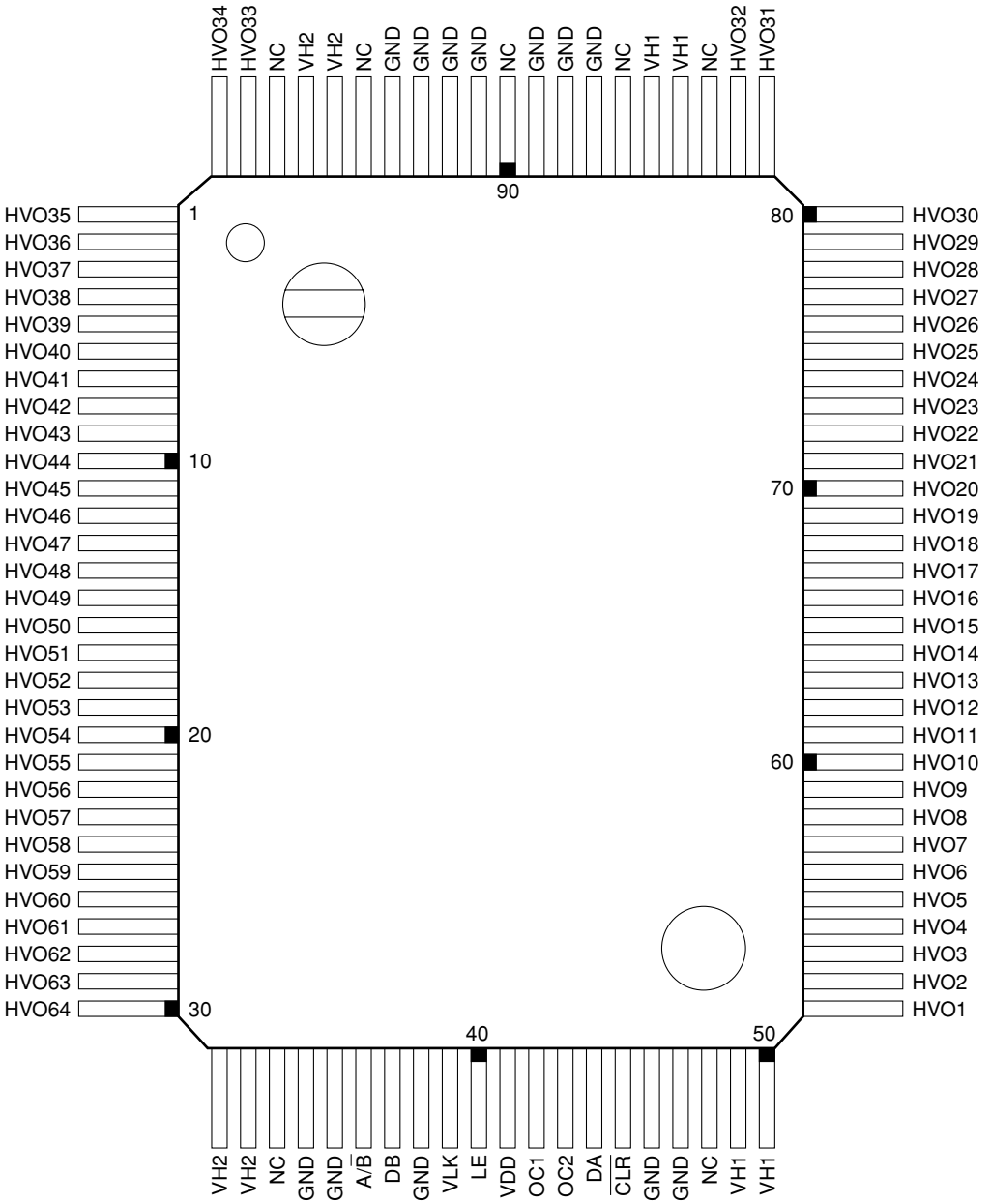
●List of IC

SN755860PJ, HD64F2328VF, PE1013B, M30624FGAFP, PD6358A, PST9246N, FS781BZB, STK795-460

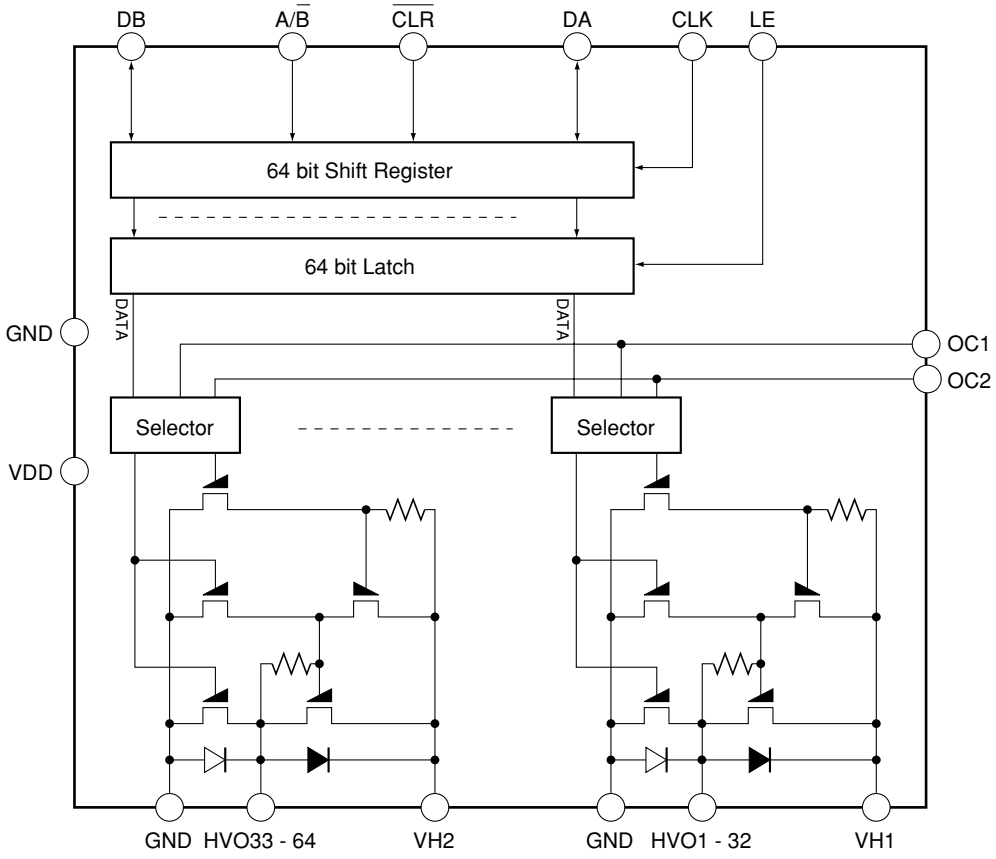
■ SN755860PJ (SCAN B ASSY : IC6201 - IC6206)
SN755860PJ (SCAN A ASSY : IC6001 - IC6006)

• Scan IC

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

Name	Pin No.	I/O	Num.	Function
CLK	39	I	1	Shift clock (start edge partial response)
DA	44	I/O	1	The serial data input of shifting register
DB	37	I/O	1	The serial data output of shifting register
LE	40	I	1	It output data done a latch of by "L" level
A/B	36	I	1	A shift directional control signal of shift register
CLR	45	I	1	It do data of shift register with "L" by "L" level
OC1	42	I	1	An output control terminal of HVO
OC2	43	I	1	An output control terminal of HVO
HVO	1-30, 51-82, 99, 100	O	64	High voltage drive output (HVO1 - HVO64)
VDD	41	–	1	Logic power supply
GND	34, 35, 38, 46, 47, 87-89, 91-94	–	12	Standard potential. This is common to HVO1 - HVO64.
VH1	84, 85, 49, 50	–	4	The high potential circuit power supply which is common to HVO1 - HVO32
VH2	31, 32, 96, 97	–	4	The high potential circuit power supply which is common to HVO33 - HVO64
NC	33, 48, 95, 83, 86, 90, 98	–	7	It is the insulation electrically

HD64F2328VF (DIGITAL VIDEO ASSY : IC1101)

- **Panel Microcomputer**

● Pin Function

No.	Pin Name	Function
1	CS_23	PE5064 (IC1703) control output
2	NC	NC Terminal
3	VSS	GND
4	VSS	GND
5	VCC	3.3V power supply
6	UA0	Address bus
7	UA1	Address bus
8	UA2	Address bus
9	UA3	Address bus
10	VSS	GND
11	UA4	Address bus
12	UA5	Address bus
13	UA6	Address bus
14	UA7	Address bus
15	UA8	Address bus
16	UA9	Address bus
17	UA10	Address bus
18	UA11	Address bus
19	VSS	GND
20	UA12	Address bus
21	UA13	Address bus
22	UA14	Address bus
23	UA15	Address bus
24	UA16	Address bus
25	UA17	Address bus
26	UA18	Address bus
27	UA19	Address bus
28	VSS	GND
29	UA20	Address bus
30	PA5	NC terminal
31	PA6	NC terminal
32	PA7	NC terminal
33	CE_PN	Enables / for panel microcomputer
34	CE_PN	Enables / for panel microcomputer
35	VSS	GND
36	VSS	GND
37	APLP	The APL value acquisition trigger signal input
38	VD_31	The V signal input from IC1401 (PD6358)
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	Data bus
42	UD2	Data bus
43	UD3	Data bus
44	VSS	GND
45	UD4	Data bus
46	UD5	Data bus
47	UD6	Data bus
48	UD7	Data bus
49	UD8	Data bus
50	UD9	Data bus

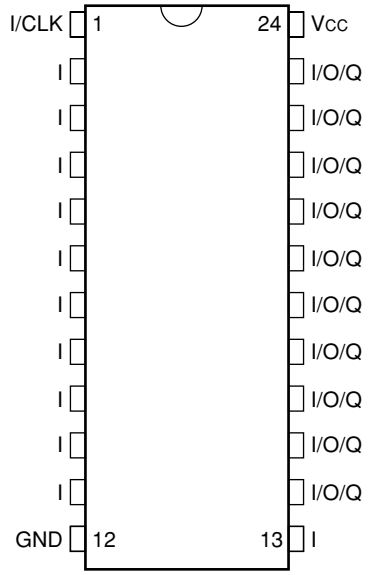
No.	Pin Name	Function
51	UD10	Data bus
52	UD11	Data bus
53	VSS	GND
54	UD12	Data bus
55	UD13	Data bus
56	UD14	Data bus
57	UD15	Data bus
58	VCC	3.3V power supply
59	D_TXD	Communication with IC1207 (module microcomputer)
60	EXT_TXD	Communication with the outside (program notes)
61	D_RXD	Communication with IC1207 (module microcomputer)
62	EXT_RXD	Communication with the outside (program notes)
63	D_CLK	Communication with IC1207 (module microcomputer)
64	P60	NC terminal
65	VSS	GND
66	CS_FLASH	A flash memory control terminal
67	VSS	GND
68	VSS	GND
69	P61	NC terminal
70	UDREQ	IC1703 (PE5064) control terminal
71	P63	NC terminal
72	WE_FLASH	A flash memory note control signal (unused)
73	BUSY	The command receipt of a message lye Norwich output
74	REQ_PU	A communication demand to a module microcomputer
75	SEL23B	IC1703 (PE5064) control terminal
76	CLRB	IC1703 (PE5064) control terminal
77	FR_SEL	The free run select signal output
78	RST31B	The reset output to IC1301, IC1401 (PD6358)
79	RST23B	The reset output to IC1703 (PE5064)
80	FWE	Microcomputer program note control signal
81	RESET	Reset input
82	NMI	The at the rate of tang input (unused)
83	STBY	The hardware standby input (unused)
84	VCC	3.3V power supply
85	XTAL	A clock oscillation child connection terminal
86	EXTAL	A clock oscillation child connection terminal
87	VSS	GND
88	PF7	NC terminal
89	VCC	3.3V power supply
90	PF6	NC terminal
91	RDB	A read control terminal from an outside slave device
92	HWRB	A wright control terminal to an outside slave device
93	PF3	NC terminal
94	PF2	NC terminal
95	PF1	NC terminal
96	PF0	NC terminal
97	P50	NC terminal
98	P51	NC terminal
99	VSS	GND
100	VSS	GND

No.	Pin Name	Function
101	P52	NC terminal
102	P53	NC terminal
103	AVCC	3.3V power supply
104	VREF	A/D, D/A reference voltage input (unused)
105	STOPB	The drive control input from IC1703 (PE5064)
106	P41	NC terminal
107	RYBY	The flash memory note ready input
108	ADR_K_EMG_L1	The emergency input from panel bottom address resonance block
109	ADR_K_EMG_U1	The emergency input from panel upper address resonance block
110	ADR_K_EMG_L2	The emergency input from panel bottom address resonance block (unused)
111	ADR_K_EMG_U2	The emergency input from panel upper address resonance block (unused)
112	P47	NC terminal
113	AVSS	GND
114	VSS	GND
115	MUTE_ADR	The panel mute signal input
116	MUTE_SUS	The X and Y drive mute signal output (unused)
117	P15	NC terminal
118	HD	The HD signal input from outside Assy (RGB Assy etc.)
119	P13	NC terminal
120	P12	NC terminal
121	PC_VIDEO	The PC/Video identification output
122	VD	The HD signal input from outside Assy (RGB Assy etc.)
123	MD0	The microcomputer mode of operation select signal input
124	MD1	The microcomputer mode of operation select signal input
125	MD2	The microcomputer mode of operation select signal input
126	PG0	NC terminal
127	CS_31Y	IC1301, IC1401 (PD6358) control signal
128	CS_31X	IC1301, IC1401 (PD6358) control signal

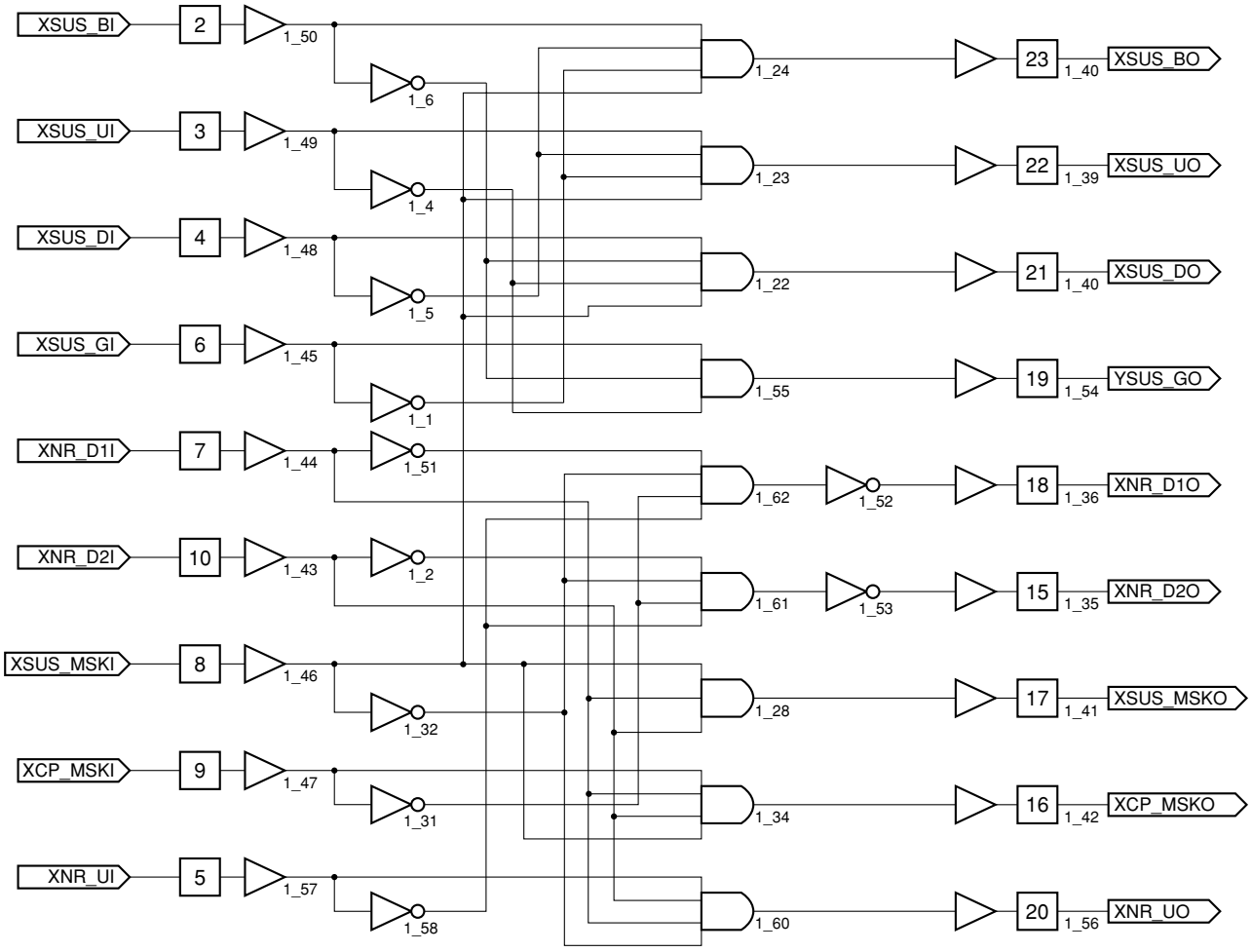
■ PE1013B (X DRIVE ASSY : IC3003)

• Drive Protect PLD

● Pin Assignment (Top View)



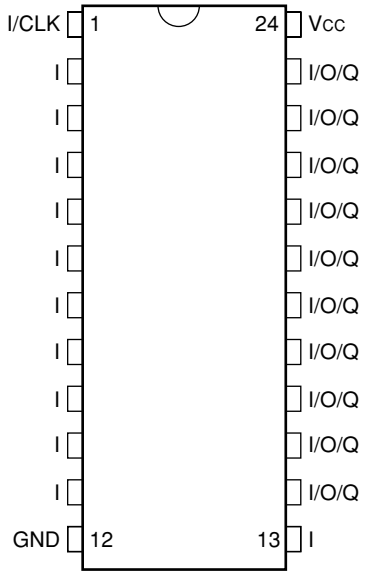
● Block Diagram



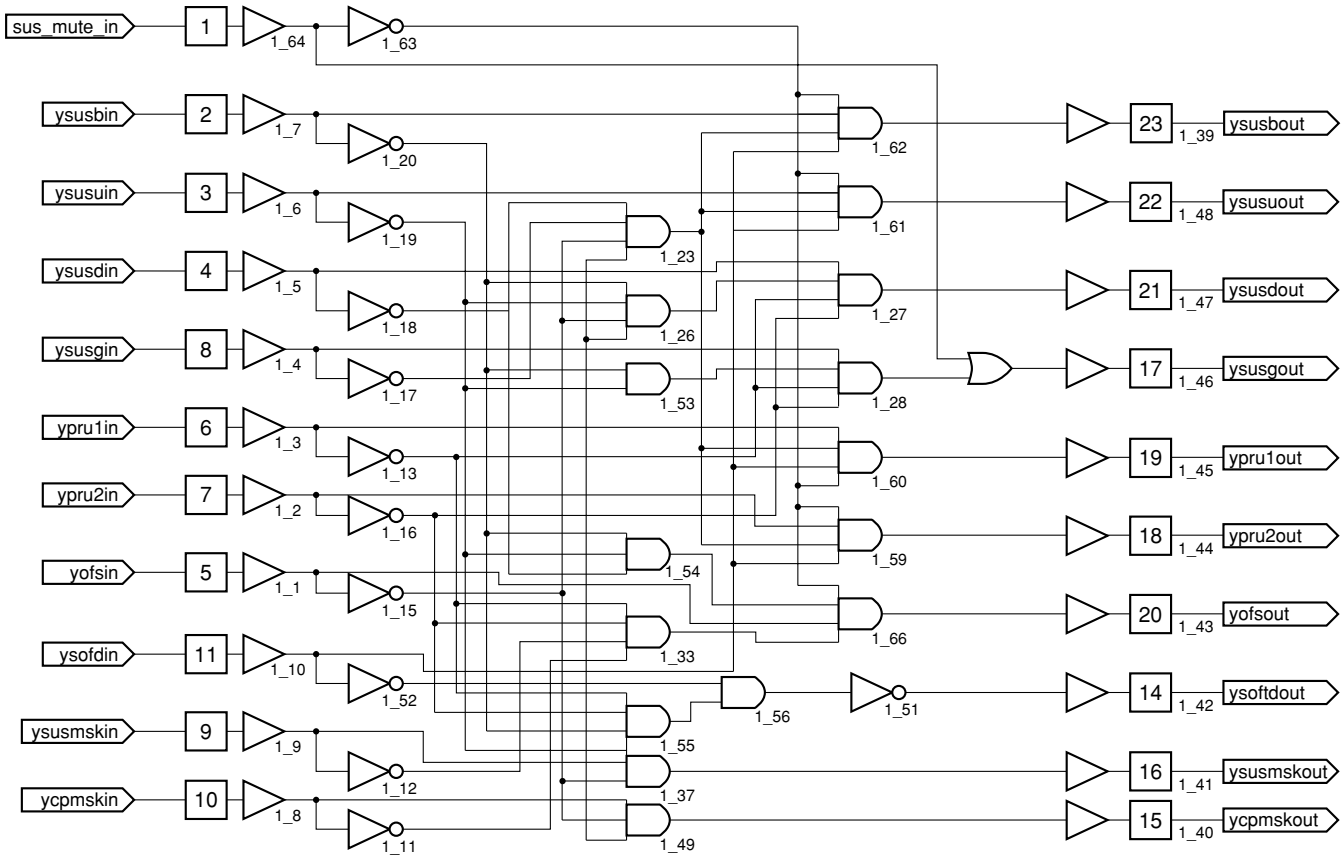
■ PE1013B (Y DRIVE ASSY : IC2006)

• Drive Protect PLD

● Pin Assignment (Top View)



● Block Diagram



■ M30624FGAFP (DIGITAL VIDEO ASSY : IC1207)

• Module Microcomputer

● Pin Function

No.	Pin Name	Function
1	TXD	Serial 3 line data output for communication with a panel microcomputer
2	CLK	Serial 3 line clock for communication with a panel microcomputer
3	NC	NC terminal
4	NC	NC terminal
5	NC	NC terminal
6	NC	NC terminal
7	NC	NC terminal
8	BYTE	The external data bus width reshuffling input (I am unused and connect GND)
9	CNVSS	A power supply for program note (a note, 5V, usually, pull-down
10	XCIN	NC terminal
11	XCOUT	NC terminal
12	RESET	A reset input terminal
13	XOUT	Clock output terminal
14	VSS	GND
15	XIN	Clock input terminal
16	VCC	5V standby power
17	NMI	Because a NMI interruption terminal is unused, It handle pull up.
18	REM	The SR signal input
19	REQ_PU	A communication demand from a panel microcomputer (the pulse meter acquisition)
20	/SW_TRG	Main switch OFF / ON search
21	NC	NC terminal
22	NC	NC terminal
23	NC	NC terminal
24	AC_OFF	AC power OFF search and power supply ASSY differentiation.
25	PD_TRIGGER	Power down search
26	NC	NC terminal
27	NC	NC terminal
28	NC	NC terminal
29	SCL	EEPROM, IIC communication with power supply ASSY
30	SDA	EEPROM, IIC communication with power supply ASSY
31	TXD1	Communication with the outside (a program note)
32	RXD1	Communication with the outside (a program note)
33	CLK1	Communication with the outside (a program note)
34	BUSY1	Communication with the outside (a program note)
35	TXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
36	RXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
37	NC	NC terminal
38	REQ_MD/A_MUTE	232C communication demand (a request to a main microcomputer) / audio system mute
39	NC	NC terminal
40	NC	NC terminal
41	EPM	The EPM input for program note (L fixation)
42	NC	NC terminal
43	PU_CE	Enables/ for panel microcomputer
44	NC	NC terminal
45	MOD_SW/A_NG	The model of machines distinction input / audio system NG input
46	CE	The CE input for program note (H fixation)
47	DITHER/SW_STC	Power supply search of a dither setting / media receiver for module
48	NC	NC terminal
49	/SW_STP	Power supply search of a panel
50	NC	NC terminal

No.	Pin Name	Function
51	NC	NC terminal
52	RELAY	The output for power supply ON / OFF change
53	POWER/MSTATE	Input / SII861 master information for power supply ON / OFF change
54	NC	NC terminal
55	WE_PN	Buffer state control for panel microcomputer note
56	MD0	The panel microcomputer mode of operation change output
57	MD2	The panel microcomputer mode of operation change output
58	FWE	The panel microcomputer program note control signal output
59	RST_PU	The panel microcomputer reset output
60	PN_MUTE	The panel mute input
61	NC	NC terminal
62	VCC	5V standby power
63	NC	NC terminal
64	VSS	GND
65	NC	NC terminal
66	NC	NC terminal
67	/A_SCL	IIC clock for audio system
68	/A_SDA	IIC data for audio system
69	APD_MUTE	A mute signal of address series
70	ADR_K_PD	The address oscillatory system PD input
71	ADR_PD	The address series PD input
72	DCC_PD	The power supply system PD input
73	NC	NC terminal
74	NC	NC terminal
75	RST2	Panel microcomputer reset search
76	NC	NC terminal
77	/DDC_SCL	IIC communication with a media receiver
78	/DDC_SDA	IIC communication with a media receiver
79	NC	NC terminal
80	NC	NC terminal
81	DEW_DET	The dew condensation sensor input
82	NC	NC terminal
83	NC	NC terminal
84	NC	NC terminal
85	NC	NC terminal
86	LED_G	Green LED lighting (LED on interface ASSY in a panel module)
87	LED_R	Red LED lighting (LED on interface ASSY in a panel module)
88	NC	NC terminal
89	BUSY	Communication permission / inhibiting signal from a panel microcomputer
90	NC	NC terminal
91	NC	NC terminal
92	/F_KEY1	The front KEY input
93	MAX_PLS2/F_KEY2	The terminal / front KEY input for brightness setting mode of operation change
94	TEMP1	The A/D input for temperature sensor
95	MAX_PLS? /CCKM	Terminal / connection search for brightness setting mode of operation change
96	AVSS	GND for AD conversion
97	PM_ST	The A/D input for model of machines distinction
98	VREF	Reference voltage for AD conversion
99	AVCC	5V standby power for AD conversion
100	RXD	Serial 3 line data entry for communication with a panel microcomputer

■ PD6358A (DIGITAL VIDEO ASSY : IC1301)

• **Picture Improved IC**

● **Pin Function**

No.	Pin Name	Function
1	VSS	GND
2	TESTO6	Test output terminal (unused)
3	OSDCLK	The CLK input for OSD
4	TTST	Test input terminal (unused)
5	VDDI	2.5V power supply
6	OVDDE-01	3.3V power supply
7	AGO0	Address data output (G signal)
8	VDDI	2.5V power supply
9	AGO2	Address data output (G signal)
10	AGO3	Address data output (G signal)
11	AGO4	Address data output (G signal)
12	VDDI	2.5V power supply
13	ARO6	Address data output (R signal)
14	AGO7	Address data output (G signal)
15	VDDI	2.5V power supply
16	ARO9	Address data output (R signal)
17	ABO9	Address data output (B signal)
18	VDDI	2.5V power supply
19	ADRCLKO2	The address CLK output (for panel upper part)
20	ARO12	Address data output (R signal)
21	ARO13	Address data output (R signal)
22	AGO14	Address data output (G signal)
23	AGO15	Address data output (G signal)
24	ARO16	Address data output (R signal)
25	ARO17	Address data output (R signal)
26	VSS	GND
27	ABO17	Address data output (B signal)
28	AGO17	Address data output (G signal)
29	AGO18	Address data output (G signal)
30	ABO19	Address data output (B signal)
31	UDAT15	Microcomputer data bus
32	UDAT12	Microcomputer data bus
33	UDAT9	Microcomputer data bus
34	UDAT5	Microcomputer data bus
35	OVDDE-06	3.3V power supply
36	APLP	APL value output trigger signal
37	OVDDE-08	3.3V power supply
38	CS5BI	The chip select input
39	CS4BI	The chip select input
40	UADRI13	Microcomputer address bus
41	UADRI9	Microcomputer address bus
42	UADRI6	Microcomputer address bus
43	UADRI2	Microcomputer address bus
44	UADRI1	Microcomputer address bus
45	TESTI2	Test input terminal (unused)
46	BIT0	The subfield No output (the 0 bit)
47	OVDDE-11	3.3V power supply
48	TESTO4	Test output terminal (unused)
49	ARO39	Address data output (G signal)
50	AGO38	Address data output (G signal)

No.	Pin Name	Function
51	VSS	GND
52	ABO37	Address data output (B signal)
53	ABO36	Address data output (B signal)
54	ARO36	Address data output (R signal)
55	ABO34	Address data output (B signal)
56	ADRCLKO4	The address CLK output (for panel bottom part)
57	AGO33	Address data output (G signal)
58	AGO32	Address data output (G signal)
59	AGO31	Address data output (G signal)
60	AGO30	Address data output (G signal)
61	AGO29	Address data output (G signal)
62	VDDI	2.5V power supply
63	ABO27	Address data output (B signal)
64	AGO26	Address data output (G signal)
65	VDDI	2.5V power supply
66	AGO24	Address data output (G signal)
67	VDDI	2.5V power supply
68	ABO22	Address data output (B signal)
69	VDDI	2.5V power supply
70	ARO21	Address data output (R signal)
71	ARO20	Address data output (R signal)
72	VDDI	2.5V power supply
73	OVDDE-14	3.3V power supply
74	TDI	The JTAG input
75	RBI9	The R picture B aspect signal input (the ninth bit)
76	VSS	GND
77	RBI8	The R picture B aspect signal input (the eighth bit)
78	RBI6	The R picture B aspect signal input (the sixth bit)
79	RBI4	The R picture B aspect signal input (the fourth bit)
80	OVSS-09	GND
81	RSTB	Reset input
82	GBI8	The G picture B aspect signal input (the eighth bit)
83	OVDDE-18	3.3V power supply
84	GBI5	The G picture B aspect signal input (the fifth bit)
85	GBI2	The G picture B aspect signal input (the second bit)
86	DEI	DE signal input
87	BBI6	The B picture B aspect signal input (the sixth bit)
88	BBI3	The B picture B aspect signal input (the third bit)
89	VDI	VD signal input
90	HDI	HD signal input
91	RAI6	The R picture A aspect signal input (the sixth bit)
92	RAI2	The R picture A aspect signal input (the second bit)
93	TESTI0	Test input terminal (unused)
94	OVSS-11	GND
95	GAI7	The G picture A aspect signal input (the seventh bit
96	GAI3	The G picture A aspect signal input (the third bit)
97	GAI0	The G picture A aspect signal input (the 0 bit)
98	BAI6	The B picture A aspect signal input (the sixth bit)
99	BAI3	The B picture A aspect signal input (the third bit)
100	BAI0	The B picture A aspect signal input (the 0 bit)

No.	Pin Name	Function
101	TESTO7	Test output terminal (unused)
102	TESTO5	Test output terminal (unused)
103	OSDH	OSDH input
104	BLK	OSDBLK input
105	OSDB	OSDB signal input
106	NC	NC terminal
107	ARO1	Address data output (R signal)
108	ARO2	Address data output (R signal)
109	ARO3	Address data output (R signal)
110	ARO4	Address data output (R signal)
111	ARO5	Address data output (R signal)
112	ABO5	Address data output (B signal)
113	ARO7	Address data output (R signal)
114	ARO8	Address data output (R signal)
115	ABO8	Address data output (B signal)
116	AGO9	Address data output (G signal)
117	AGO10	Address data output (G signal)
118	ADRCLKO1	Address CLK output (for panel upper part)
119	ABO11	Address data output (B signal)
120	ABO12	Address data output (B signal)
121	ARO14	Address data output (R signal)
122	ARO15	Address data output (R signal)
123	ABO15	Address data output (B signal)
124	ABO16	Address data output (B signal)
125	AGO16	Address data output (G signal)
126	ARO18	Address data output (R signal)
127	AGO19	Address data output (G signal)
128	OVDDE-05	3.3V power supply
129	UDAT13	Microcomputer data bus
130	UDAT10	Microcomputer data bus
131	UDAT6	Microcomputer data bus
132	UDAT3	Microcomputer data bus
133	UDAT0	Microcomputer data bus
134	OVDDE-07	3.3V power supply
135	LR	The panel LR select input
136	RDBI	Microcomputer read control terminal
137	CLKSEL	CLK select input
138	UADRI10	Microcomputer address bus
139	UADRI7	Microcomputer address bus
140	UADRI3	Microcomputer address bus
141	CYCLEB	Address data output control signal
142	BIT2	Subfield No. output (the second bit)
143	SFSTB	Address data output control signal
144	OVSS-05	GND
145	TESTO2	Test output terminal (unused)
146	ABO38	Address data output (B signal)
147	ARO38	Address data output (R signal)
148	ARO37	Address data output (R signal)
149	AGO36	Address data output (G signal)
150	ARO35	Address data output (R signal)

No.	Pin Name	Function
151	ADRCLKO3	The address CLK output (for panel bottom part)
152	ABO33	Address data output (B signal)
153	ABO32	Address data output (B signal)
154	VDDI	2.5V power supply
155	ABO30	Address data output (B signal)
156	VDDI	2.5V power supply
157	ABO28	Address data output (B signal)
158	ARO28	Address data output (R signal)
159	ABO26	Address data output (B signal)
160	ABO25	Address data output (B signal)
161	ABO24	Address data output (B signal)
162	ARO24	Address data output (R signal)
163	ARO23	Address data output (R signal)
164	ARO22	Address data output (R signal)
165	AGO21	Address data output (G signal)
166	AGO20	Address data output (G signal)
167	TDO	JTAG signal
168	TMS	JTAG signal
169	RBI7	The R picture B aspect signal input (the seventh bit)
170	TCK	JTAG signal
171	RBI5	The R picture B aspect signal input (the fifth bit)
172	RBI3	The R picture B aspect signal input (the third bit)
173	RBI1	The R picture B aspect signal input (the first bit)
174	OVDDE-16	3.3V power supply
175	GBI7	The G picture B aspect signal input (the seventh bit)
176	OVSS-10	GND
177	GBI4	The G picture B aspect signal input (the fourth bit)
178	GBI1	The G picture B aspect signal input (the first bit)
179	BBI9	The B picture B aspect signal input (the ninth bit)
180	BBI5	The B picture B aspect signal input (the fifth bit)
181	BBI2	The B picture B aspect signal input (the second bit)
182	RAI9	The R picture A aspect signal input (the ninth bit)
183	CLK3	CLK input terminal (unused)
184	RAI5	The R picture A aspect signal input (the fifth bit)
185	RAI1	The R picture A aspect signal input (the first bit)
186	TESTI1	Test input terminal (unused)
187	GAI9	The G picture A aspect signal input (the ninth bit)
188	GAI6	The G picture A aspect signal input (the sixth bit)
189	GAI2	The G picture A aspect signal input (the second bit)
190	BAI9	The B picture A aspect signal input (the ninth bit)
191	BAI5	The B picture A aspect signal input (the fifth bit)
192	BAI2	The B picture A aspect signal input (the second bit)
193	BAI1	The B picture A aspect signal input (the first bit)
194	OVSS-01	GND
195	OVSS-02	GND
196	OSDG	OSDG signal input
197	ARO0	Address data output (R signal)
198	ABO0	Address data output (B signal)
199	ABO1	Address data output (B signal)
200	ABO2	Address data output (B signal)

No.	Pin Name	Function
201	ABO3	Address data output (B signal)
202	ABO4	Address data output (B signal)
203	OVDDE-02	3.3V power supply
204	ABO6	Address data output (B signal)
205	ABO7	Address data output (B signal)
206	VDDI	2.5V power supply
207	OVDDE-03	3.3V power supply
208	ARO10	Address data output (R signal)
209	ABO10	Address data output (B signal)
210	AGO11	Address data output (G signal)
211	AGO12	Address data output (G signal)
212	ABO13	Address data output (B signal)
213	ABO14	Address data output (B signal)
214	OVDDE-04	3.3V power supply
215	OVSS-03	GND
216	ARO19	Address data output (R signal)
217	TESTO1	Test output terminal (unused)
218	UDAT14	Microcomputer data bus
219	UDAT11	Microcomputer data bus
220	UDAT7	Microcomputer data bus
221	UDAT4	Microcomputer data bus
222	UDAT1	Microcomputer data bus
223	VDRD	V signal output
224	HWRBI	Microcomputer wright control terminal
225	UADRI14	Microcomputer address bus
226	OVDDE-09	3.3V power supply
227	UADRI11	Microcomputer address bus
228	UADRI8	Microcomputer address bus
229	UADRI4	Microcomputer address bus
230	BIT3	Subfield No. output (the third bit)
231	BIT1	Subfield No. output (the first bit)
232	OVDDE-10	3.3V power supply
233	TESTO3	Test output terminal (unused)
234	ABO39	Address data output (B signal)
235	AGO37	Address data output (G signal)
236	OVSS-06	GND
237	AGO35	Address data output (G signal)
238	ADRCLKO5	Address CLK output (for panel bottom part)
239	ARO34	Address data output (R signal)
240	ARO33	Address data output (R signal)
241	ABO31	Address data output (B signal)
242	ARO31	Address data output (R signal)
243	ABO29	Address data output (B signal)
244	ARO29	Address data output (R signal)
245	OVDDE-12	3.3V power supply
246	ARO27	Address data output (R signal)
247	ARO26	Address data output (R signal)
248	ARO25	Address data output (R signal)
249	OVDDE-13	3.3V power supply
250	AGO23	Address data output (G signal)

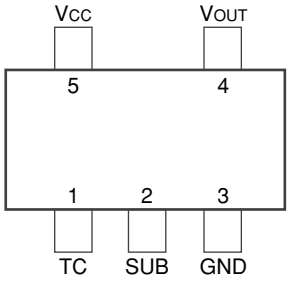
No.	Pin Name	Function
251	AGO22	Address data output (G signal)
252	VDDI	2.5V power supply
253	ABO20	Address data output (B signal)
254	OVSS-07	GND
255	OVDDE-15	3.3V power supply
256	OVSS-08	GND
257	RBI2	The R picture B aspect signal input (the second bit)
258	TRST	JTAG signal
259	GBI9	The G picture B aspect signal input (the ninth bit)
260	GBI6	The G picture B aspect signal input (the sixth bit)
261	OVDDE-17	3.3V power supply
262	GBI3	The G picture B aspect signal input (the third bit)
263	GBI0	The G picture B aspect signal input (the 0 bit)
264	BBI8	The B picture B aspect signal input (the eighth bit)
265	BBI4	The B picture B aspect signal input (the fourth bit)
266	BBI1	The B picture B aspect signal input (the first bit)
267	RAI8	The R picture A aspect signal input (the eighth bit)
268	OVDDE-19	3.3V power supply
269	RAI4	The R picture A aspect signal input (the fourth bit)
270	RAI0	The R picture A aspect signal input (the 0 bit)
271	FREERUN	The freerun control input
272	GAI8	The G picture A aspect signal input (the eighth bit)
273	GAI5	The G picture A aspect signal input (the fifth bit)
274	GAI1	The G picture A aspect signal input (the first bit)
275	BAI8	The B picture A aspect signal input (the eighth bit)
276	BAI4	The B picture A aspect signal input (the fourth bit)
277	VDDE	3.3V power supply
278	OSDV	OSDV input
279	VSS	GND
280	OSDR	OSDR signal input
281	VDDE	3.3V power supply
282	AGO1	Address data output (G signal)
283	VSS	GND
284	VDDI	2.5V power supply
285	VDDI	2.5V power supply
286	AGO5	Address data output (G signal)
287	AGO6	Address data output (G signal)
288	VDDI	2.5V power supply
289	AGO8	Address data output (G signal)
290	VSS	GND
291	ADRCLKO0	The address CLK output (for panel upper part)
292	VDDE	3.3V power supply
293	ARO11	Address data output (R signal)
294	VSS	GND
295	AGO13	Address data output (G signal)
296	VDDE	3.3V power supply
297	ABO18	Address data output (B signal)
298	VSS	GND
299	TESTO0	Test output terminal (unused)
300	VDDI	2.5V power supply

No.	Pin Name	Function
301	UDAT8	Microcomputer data bus
302	VSS	GND
303	UDAT2	Microcomputer data bus
304	VDDI	2.5V power supply
305	OVSS-04	GND
306	UADRI15	Microcomputer address bus
307	VDDI	2.5V power supply
308	UADRI12	Microcomputer address bus
309	VSS	GND
310	UADRI5	Microcomputer address bus
311	VDDI	2.5V power supply
312	NC	NC terminal
313	VSS	GND
314	AGO39	Address data output (G signal)
315	VDDE	3.3V power supply
316	ABO35	Address data output (B signal)
317	VSS	GND
318	AGO34	Address data output (G signal)
319	VDDE	3.3V power supply
320	ARO32	Address data output (R signal)
321	VSS	GND
322	ARO30	Address data output (R signal)
323	VDDI	2.5V power supply
324	AGO28	Address data output (G signal)
325	AGO27	Address data output (G signal)
326	NC	NC terminal
327	AGO25	Address data output (G signal)
328	VSS	GND
329	ABO23	Address data output (B signal)
330	VDDE	3.3V power supply
331	ABO21	Address data output (B signal)
332	VSS	GND
333	VPD	GND
334	VDDE	3.3V power supply
335	RBI0	The R picture B aspect signal input (the 0 bit)
336	VSS	GND
337	ACLK	CLK input (25MHz)
338	VDDI	2.5V power supply
339	CLK4	CLK input (50MHz)
340	VSS	GND
341	BBI7	The B picture B aspect signal input (the seventh bit)
342	VDDI	2.5V power supply
343	BBI0	The B picture B aspect signal input (the 0 bit)
344	RAI7	The R picture A aspect signal input (the seventh bit)
345	VDDI	2.5V power supply
346	RAI3	The R picture A aspect signal input (the third bit)
347	VSS	GND
348	CLK2	The image system CLK input
349	VDDI	2.5V power supply
350	GAI4	The G picture A aspect signal input (the fourth bit)
351	VSS	GND
352	BAI7	The B picture A aspect signal input (the seventh bit)

■ PST9246N (DIGITAL VIDEO ASSY : IC1208)

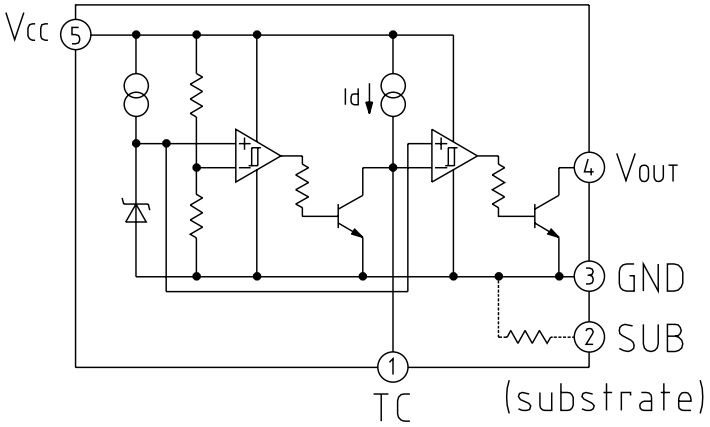
• Reset IC

● Pin Assignment (Top View)



SOT-25
(TOP VIEW)

● Block Diagram



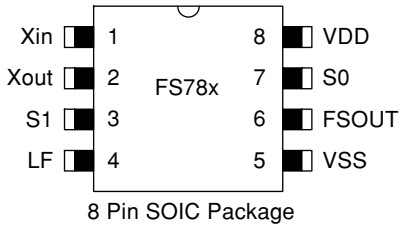
● Pin Function

Pin No.	Pin name	Functions
1	TC	TPLH control pin
2	SUB	Substate pin
3	GND	GND pin
4	VOUT	Reset signal output pin
5	VCC	VCC pin / voltage detect pin

FS781BZB (DIGITAL VIDEO ASSY : IC1802)

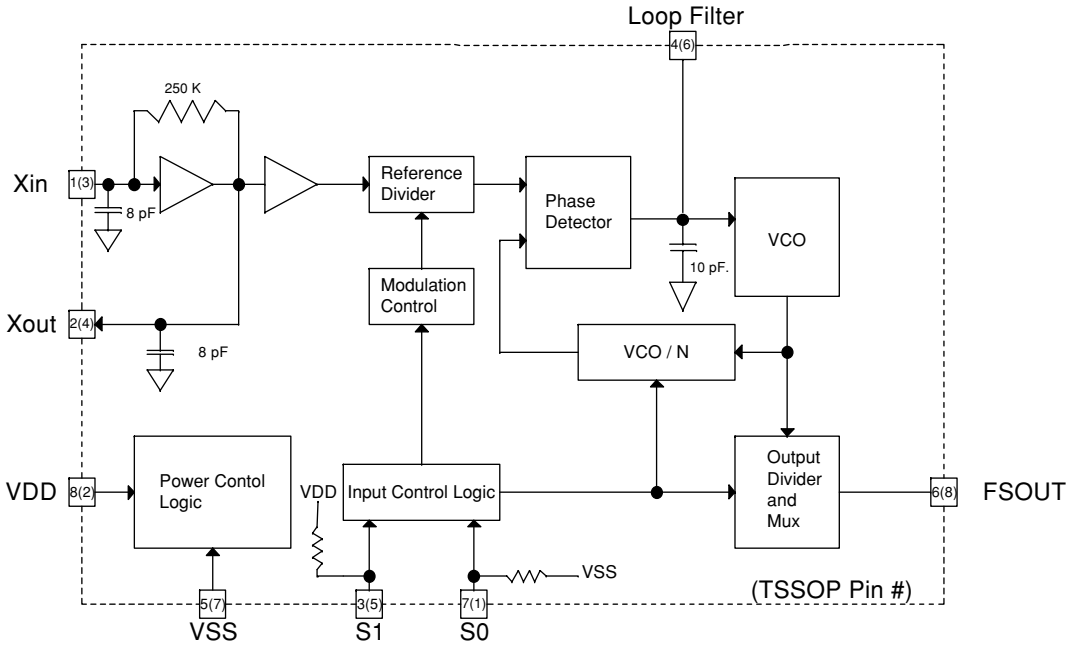
- **Low EMI Clock IC**

• Pin Assignment (Top View)



8 Pin SOIC Package

• Block Diagram



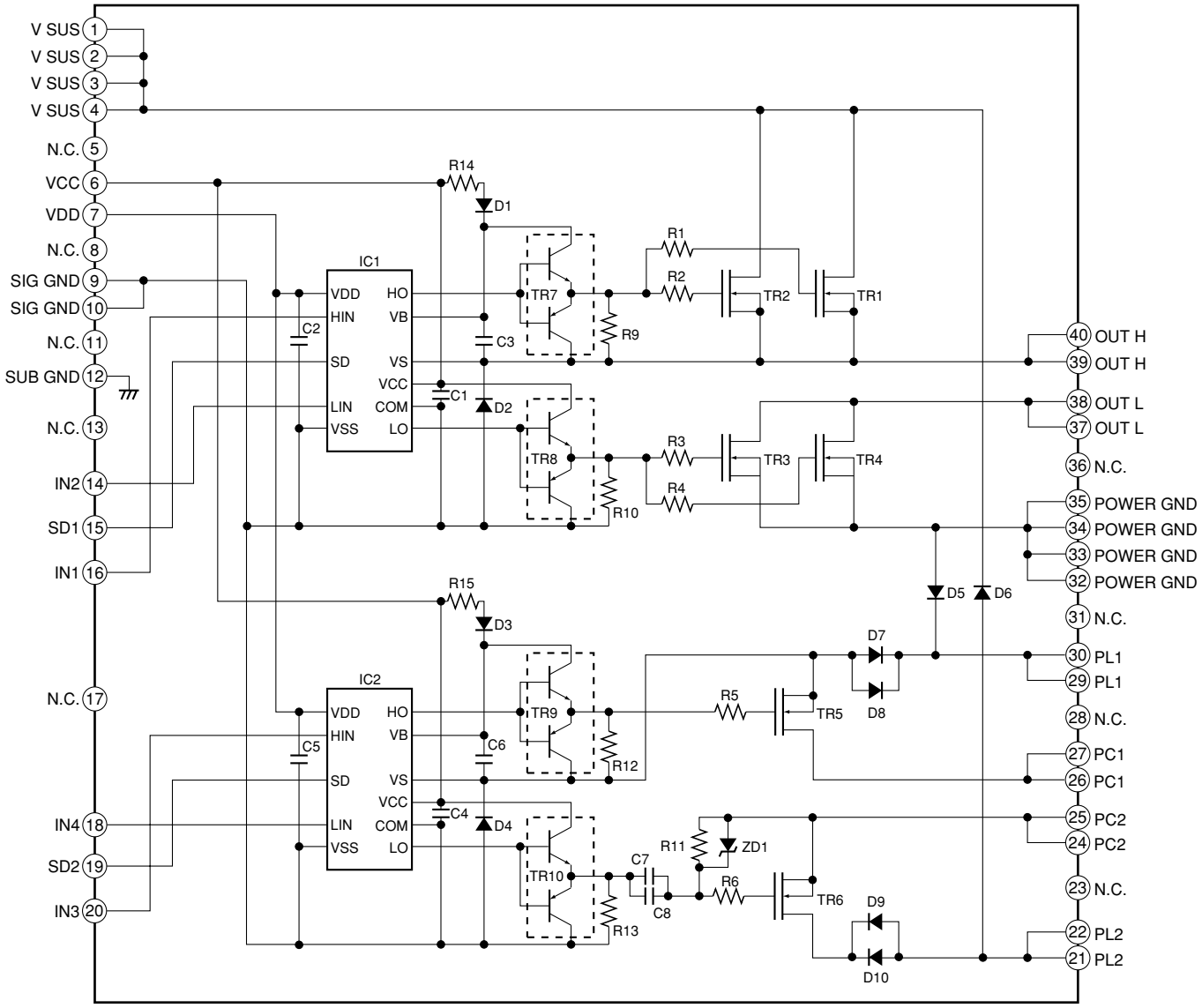
• Pin Function

No.	Pin Name	I/O	Type	Function
1/2	Xin/Xout	I/O	Analog	Pins form an on-chip reference oscillator when connected to terminals of an external parallel resonant crystal. Xin may be connected to TTL/CMOS external clock source. If Xin connected to external clock other than crystal, leave Xout (pin2) unconnected.
7/3	S0/S1	I	CMOS/TTL	Digital control inputs to select input frequency range and output frequency scaling. Refer to Tables 7 and 8 for selection. S0 has internal pulldown. S1 has internal pullup.
4	LF	I	Analog	Loop Filter. Single ended tri-state output of the phase detector. A two-pole passive loop filter is connected to Loop Filter (LF).
6	FSOUT	O	CMOS/TTL	Modulated Clock Frequency Output. The center frequency is the same as the input reference frequency for FS781. Input frequency is multipled by 2X and 4X for FS782 and FS784 respectively.
8	VDD	P	Power	Positive Power Supply
5	VSS	P	Power	Power Supply Ground

■ STK795-460 (X DRIVE ASSY : IC3200, IC3201) (Y DRIVE ASSY : IC2206, IC2214)

- **PDP Pulse Module IC**

● Block Diagram



8. PANEL FACILITIES

Plasma Display